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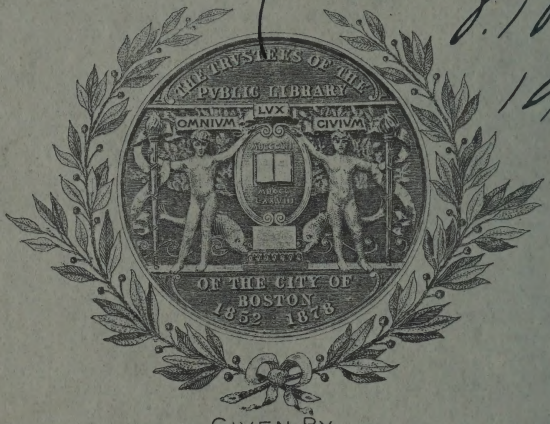

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

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SYNOPSIS OF VITAL STATISTICS FOR CALENDAR YEAR 1920.

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Deaths from all causes during the calendar year 1920 numbered 11,601, being somewhat less than during the preceding year. The exact extent of the decrease in the death rate is difficult to determine, however, because it must be measured on the basis of the estimated population, and estimates, notoriously uncertain at best, are in the present instance rendered conspicuously so by the doubt that has been cast on the accuracy of the figures furnished by the United States Census Bureau with respect to Boston. If, however, the federal censuses of 1910 and 1920 may be presumed to be correct, the population of Boston on June 30, 1920, computed according to the arithmetical method used by the United States Census Bureau, was 751,251, the death rate for 1920 was 15.44,—and the decrease as compared with the preceding year was 0.19. In justice to Boston, however, it must be borne in mind that there is probably no other city in the United States (except possibly a few small institutional communities) where so large a proportion of the deaths reported occur among nonresidents; and this is certainly true of Boston as compared with cities and towns in its immediate vicinity. No entirely satisfactory definition of the word "nonresident," for use in this connection, has ever been formulated; but if we apply the definition in common use, a nonresident is any person whose usual place of abode is elsewhere than in Boston, and 1,809 deaths fall within the nonresident class, or 15.6 per cent of the total registered mortality. The deaths of residents would under such a classification number 9,791, and the death rate for residents would be 13.09.

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Comparing the record of deaths from the so-called degenerative diseases during 1920 with the corresponding figures for the preceding year, we find that deaths from diseases of the heart increased from 1,398 to 1,474, and deaths caused by hardening of the arteries increased from 500 to 513. These increases were offset, however, by decreases in the deaths charged to cerebral hemorrhage, from 741 to 652, and in the deaths charged to diseases of the kidneys, from 656 to 604. The balance in the death record for the entire group of so-called degenerative diseases stands, therefore, 3,243 against 3,295, in favor of 1920.

Births and stillbirths together numbered 20,151, as against 19,419 in the preceding year. They were responsible in 1920 for the deaths of 149 mothers, or at the rate of 7.8 per thousand, births and stillbirths combined, as compared with 6.9 per thousand in 1919. In 657 instances the child was born dead, equivalent to 32.6 per thousand, as compared with 32.8 in the preceding year. As against 19,494 children born alive, 1,966 children died before completing the first year of life, showing an infant death rate of 100.8 per thousand live births, and an increase from 96.8 in 1919. The increase shown in the infant mortality rate is accounted for by the deaths from the following diseases: Broncho-pneumonia, 118; whooping cough, 44; measles, 15; and diarrheal diseases, 11.

Measles and whooping cough still remain among the least controllable of communicable diseases under the ordinary conditions of community life. Reported cases of measles increased from 2,196 to 6,518, and reported cases of whooping cough from 1,003 to 2,403. Deaths caused by measles increased from 27 to 65, and deaths caused by whooping cough increased from 60 to 155. In view of the frequency, however, with which measles and whooping cough terminate fatally, through broncho-pneumonia, in any study of the mortality resulting from measles and whooping cough it is necessary to reckon also with mortality charged directly to broncho-pneumonia. Deaths from broncho-pneumonia increased from 370 in 1919 to 689 in 1920.

A disturbing factor appears here, however, for when we examine the mortality record of another disease that frequently terminates fatally by broncho-pneumonia — that is, the mortality record of influenza — we find a remarkable decrease as between 1919 and 1920, suggestions that deaths that in the earlier year were reported as due to influenza were in 1920 reported as due to primary broncho-pneumonia.

The record for influenza alone was during 1920 distinctly the best during the past three years, reported deaths having diminished from 4,023 in 1918 to 903 in 1919, and to 479 in 1920, notwithstanding a slight but distinct outbreak of influenza in the early part of 1920.

The only fair way to draw any conclusion respecting the situation is, therefore, to study whooping cough, measles, influenza and broncho-pneumonia together. The basic data for such a study appears in the following statement. For purposes of convenient comparison the corresponding figure for pulmonary tuberculosis and lobar pneumonia are appended to the statement.

Disease.	Cases Reported.					Deaths.				
	Median, 1915–19.	1919.	1920.	Fluctuation, 1919–20. + or —.		Median, 1915–19.	1919.	1920.	Fluctuation, 1919–20. + or —.	
				Number.	Per Cent.				Number.	Per Cent.
Broncho-pneumonia....	*	*	*	—	—	507	370	689	+319	+86.2
Influenza.....	†	8,463	8,392	—71	—.83	80	903	479	—424	—46.9
Measles.....	5,324	2,196	6,518	+4,322	+196.8	102	27	65	+38	+140.7
Whooping cough.....	1,393	1,003	2,403	+1,400	+139.5	75	60	155	+95	+158.3
Totals.....	.....	.....	.....	.....	.....	764	1,360	1,388	+28	+2.05
Lobar pneumonia.....	‡	1,609	1,522	—87	—5.4	1,012	595	672	+77	+12.9
Pulmonary tuberculosis.	2,775	2,333	2,212	—121	—5.1	1,112	965	821	—144	—14.9

* Cases not reportable.
† Cases not reportable until October 4, 1918.
‡ Cases not reportable until May, 1917.

Infantile paralysis, quite as uncontrollable as measles, whooping cough and influenza, was unduly prevalent during the latter part of the year. Cases reported numbered 244, against 15 during the preceding year. Deaths increased from 3 to 48. Deaths, however, cannot give any clue to the gravity of an outbreak of this disease, which is characterized by such disturbing results in the way of permanent paralyses and disfigurement. Every effort was made, therefore, to facilitate early diagnosis, so as to procure the earliest practicable isolation of the patient, and the promptest institution of adequate treatment that the circumstances would permit. Two special diagnosticians were appointed to facilitate early diagnosis and treatment, and an epidemiologist was specially engaged to study the course of the outbreak, so as to permit the promptest adoption of measures calculated to prevent the spread of the disease, if any such measures should become apparent, and in

the hope that Boston might contribute something new to our knowledge concerning infantile paralysis. The report showing the results of this epidemiological study appears elsewhere in the Bulletin.

The two most conspicuous features in the mortality table, are, however, possibly the decline in the number of deaths caused by tuberculosis of all forms, from 1,147 to 956, and in the number of deaths from violence, from 783 to 648.

No one can say with certainty just why deaths from tuberculosis should have diminished in frequency as they have during the last three years, from 1,367 in 1918 to 1,147 in 1919, and now 956 in 1920. Certainly no new measure of prevention has come into operation during that time, neither in the way of general sanitation nor in the way of anything directed specifically against tuberculosis. On the other hand, overcrowding has been the rule to an ever-increasing degree, and according to our preconceived ideas should have increased the prevalence of tuberculosis, certainly of the pulmonary type of the disease. It is interesting to note in this connection that the period of rapid decline dates from the year of the great pandemic of influenza, and that up to that time the decline had been gradual and might possibly have been termed somewhat erratic, with a downward tendency. Notwithstanding hypotheses that have been advanced to the contrary, and figures adduced in support of such hypotheses, it may well be asked whether influenza has not killed off preponderatingly persons suffering from tuberculosis, even though in the early stages of the disease, and whether the present decline in the death rate from tuberculosis may not be the result of the increased prevalence of influenza rather than the result of any sanitary measures or improved methods of medical treatment.

The diminished frequency of deaths from violence, from 924 in 1918 to 783 in 1919, and now to 648 in 1920, seems to bear only one interpretation, and that is that such deaths in former years were due in no small measure to alcoholic beverages. This hypothesis receives strong support from well known facts concerning the influence of alcohol on mental and physical activities, and from the fact that the decline began coincidentally with the advent of the prohibition era. With the better education of the public regarding the effect of alcohol on the human body, and with the perfecting of machinery for the enforcement of the prohibition laws, further improvement in the death rate from violence may be looked for, with a cor-

responding diminution in the number of non-fatal injuries of all kinds, accidental, homicidal and suicidal.

It is, of course, too early to enter into any more extensive analysis of the vital statistics of Boston for the calendar year 1920, but this will be done later with the hope of salvaging from these apparently dead figures something that may be not only of general interest but that may serve as a guide toward increased efficiency in the promotion and conservation of health in Boston. A general summary of the vital statistics of Boston for 1920, with figures for comparison with preceding years, follows:

VITAL STATISTICS FOR BOSTON, YEAR 1920, COMPARED WITH TWO PRECEDING YEARS.

General Summary.

Totals and Rates.	1920.	1919.	1918.
Total deaths, all causes, stillbirths excluded	11,601	11,689	17,447
Death rate per 1,000 inhabitants	15.50	15.63	23.35
Nonresident deaths	1,809	1,896	2,424
Total deaths under one year, stillbirths excluded	1,966	1,818	2,298
Live births registered	19,494	18,781	20,063
Deaths under one year, per 1,000 live births	100.85	96.80	114.54
Birth rate, live births, per 1,000 population	26.04	25.12	26.85
Stillbirths registered	657	638	827
Deaths of mothers from causes incident to childbirth and pregnancy	158	135	139
Number of deaths of mothers per 1,000 live births and stillbirths	7.8	6.9	6.6

Deaths from Ten Leading Causes, Reportable Diseases Excepted.

Diseaess.	1920.	1919.	1918.
Heart disease	1,474	1,398	1,481
Cancer	968	905	954
Broncho-pneumonia	689	370	837
Cerebral hemorrhage	652	741	696
Violent deaths	648	783	924
Kidney disease	604	656	782
Arterio-sclerosis	513	500	593
Diarrhea and enteritis (under two years)	361	338	426
Premature birth	300	345	462
Diabetes mellitus	175	171	133
All other causes	5,217	5,482	10,159
Totals, all causes	11,601	11,689	17,447

Reportable Diseases. Cases and Deaths in Boston During the Years 1920, 1919 and 1918.

Diseases.	Cases.			Deaths.		
	1920.	1919.	1918.	1920.	1919.	1918.
Actinomycosis	1	2	.....	1		
Anterior poliomyelitis	244	15	17	48	3	9
Anthrax	4	4	4			
Cerebro-spinal meningitis	43	75	126	33	55	83
Chicken pox	1,055	1,750	742			
Diphtheria	2,010	2,670	2,832	140	153	217
Dysentery	4	7	11	3	1	4
German measles	109	64	732			
Gonorrhea	*3,042	*3,992	*3,399			
Influenza	8,392	8,463	9,590	479	903	4,023
Leprosy	3	3	3			
Malaria	15	10	13			
Measles	6,518	2,196	6,319	65	27	112
Mumps	1,281	997	785			
Ophthalmia neonatorum	509	594	692			
Pellagra	1	4	3	.....	1	3
Pneumonia (lobar)	1,522	1,609	2,268	672	595	1,539
Scarlet fever	2,154	2,173	1,126	71	30	24
Septic sore throat	47	61	20	13	7	
Smallpox	10	14	6			
Syphilis	*1,183	*1,774	*1,494	70	97	88
Tetanus	5	3	3	5	3	1
Trachoma	64	62	83			
Trichinosis	4	3				
Tuberculosis (pulmonary)	2,212	2,333	2,779	821	965	1,186
Tuberculosis (other forms)	317	282	270	135	182	181
Typhoid fever	141	120	110	11	18	20
Typhus fever	.....	.....	1	.....	.....	1
Whooping cough	2,403	1,003	2,009	155	60	182

* Figures from Massachusetts State Health Department.

That happy genius who points the way to the use of health rates instead of sickness rates, and of life rates instead of death rates, as indexes to the state of the public health, will make the reported scores of the public health game—commonly called vital statistics—much more interesting and stimulating to the lay public.

REPORT ON POLIOMYELITIS.

To the Commissioner, Health Department, Boston, Mass.:

Sir,— I have the honor to submit the following report of my investigation of the outbreak of anterior poliomyelitis in Boston in 1920.

The material contained in the report is classified under four headings:

(1.) Field investigation.
(2.) Statistical data.
(3.) Map study.
(4.) Laboratory work.

The writer is indebted to Dr. Mark W. Richardson for the loan of his valuable maps, and to Prof. M. J. Rosenau for the facilities to carry out the laboratory work.

Wolfert G. Webber.

FIELD INVESTIGATION AND STATISTICAL DATA.

The 1920 outbreak of epidemic anterior poliomyelitis in Boston commenced at the end of the second week in July. The first case was reported July 20, five days after the onset. The patient, a girl of eight years, resided in Ward 1, East Boston, in the neighborhood of Orient Heights, on the third floor of a tenement house about 200 yards from the railroad line and about 300 yards from the waterfront.

The patient had lived here for a year previously, and had not been away from home for more than a few hours at a time for many weeks prior to the onset. She had been at Winthrop Beach bathing frequently, and had played on the sand. Green-headed flies were observed at the beach, and the patient was bitten by some insect while at the beach, but how long previous to the onset this occurred could not be determined. No cases of poliomyelitis were reported from Winthrop during June or July.

No pets were kept in the patient's family, but a cat was kept in the flat below. Rats and mice were admitted to be numerous in the neighborhood. The patient was known to have bought and eaten food, such as candy and gum, at the neighboring store. Flies and mosquitoes were numerous in the locality during the summer. The presence of roaches, waterbugs and bedbugs was denied. Inspection of the neighborhood revealed no nuisances.

One week prior to the onset of this case another child, aged

five years, in the same family, was taken with fever, without other symptoms. Castor oil was administered, and the child was well the next day.

The patient and the two other children of the family had measles and pertussis the previous winter. The patient was said to have had a fall in infancy, and to have been struck by an automobile one year previous to the attack of poliomyelitis. No serious consequences of either accident were noted.

There was no other known contact with illness of any kind, and no known illness in the neighborhood, particularly among children.

The patient showed definite paralysis of one arm and one leg, and there seemed to be no doubt about the diagnosis. The onset was marked by fever and headache. There was no vomiting or stiffness of the neck.

The results of investigation of this, the first case of poliomyelitis reported in Boston in 1920, have been gone into in some detail, as they are typical of the results of investigation of fifty-odd other cases taken up in like manner. The effort to establish personal contact between cases was successful in only one instance, where two children living in different halves of a double house, but who played together, were taken sick on the same day. In all probability this was an instance of simultaneous infection. These cases were in Ward 20, where the highest case-incidence occurred, near the Neponset river Both children were known to have played on the near-by dump where rats are frequently seen.

In the investigation of cases the following points were given special attention:

(1.) Personal contact with illness of any kind.

(2.) Febrile and gastro-intestinal disturbances among children of the family and neighborhood.

(3.) Dietary factors— fruit, candy, ice cream, etc.

(4.) Household pets.

(5.) Insects — house flies, biting flies, mosquitoes, fleas, water-bugs, roaches, bedbugs.

(6.) Proximity of food stores, stables and dumps.

(7.) Proximity of railroad lines and waterways; open sewers.

(8.) Presence of rats and mice.

General Characteristics of the Outbreak.

As indicated by the accompanying chart and tables, the 1920 outbreak of poliomyelitis lasted approximately ten weeks.

It began in the middle of July, reached its peak in September, when 20 cases were reported for the week ending September 25 and fell off rapidly during October. During the month of November 11 cases were reported; in December, 1 case.

The 1920 outbreak was moderate in severity as compared with that of 1916. The total number of Boston cases reported was 162, as compared with 485 in 1916. The case-incidence was 21.3 as against 64.4 per hundred thousand population in 1916. The mortality in 1920 was 19.1 per cent; in 1916 it was 42.1 per cent.

Fifty-four per cent of the cases and 51 per cent of the deaths from poliomyelitis in 1920 occurred in children under five years of age. The mortality in children under five was 18 per cent. The highest mortality occurred in the age group from fifteen to nineteen years, where it was 50 per cent.

There were no instances where more than one case appeared in a family.

Study of Case Distribution by Wards.

Study of the distribution of cases by wards in the 1920 outbreak shows that in fifteen of the twenty-six wards the case-incidence was above the average for the city as a whole. The remaining eleven wards were below the average. Wards 2, 3, 8, 10 and 16 showed the lowest incidence, under 10 per hundred thousand. The highest incidence was seen in Ward 20, with 50 cases per hundred thousand. Ward 1 followed with 44 and then Ward 25 with 41 cases per hundred thousand.

It will be noted that the highest case-incidence occurred in the outlying wards adjacent to waterways. Ward 1, where the outbreak started, is on the harbor front. Ward 20 is on the Neponset river, and Ward 25 is on the Charles river. However, not all the wards on the waterfront were badly infected. Wards 2, 3 and 10 had a low case-incidence, and yet are waterfront wards. Several wards not bordering on the waterfront were badly infected, as, for example, Wards 22 and 23. The 1920 outbreak had its inception and showed the highest incidence in the outlying wards.

MAP STUDY.

The writer was fortunate enough to have the loan, through the courtesy of Dr. Mark W. Richardson, of ward maps of the city on which had been plotted the location of cases of poliomyelitis reported in 1916. On these same maps cases of the 1920 outbreak were plotted.

Study of these maps reveals the striking correlation between the location of groups of cases in both outbreaks, namely, along the course of railroad lines, waterways and open or partly covered sewers. The grouping of cases along railroad lines and waterways is evident enough from the study of the location of the 1920 cases alone. But when compared in the manner described with the grouping of cases in the 1916 outbreak, the correlation cannot fail to impress the observer. The same is true, to a less extent, of the grouping of cases along the courses of open or partly covered sewers. This last observation is best made in Wards 20 and 25. In Ward 20 a partly covered sewer empties into the Neponset river. In Ward 25 one empties into the Charles river. Along the course of these two partly open sewers a grouping of poliomyelitis cases can be observed. It will be remembered that Wards 20 and 25 were among the most heavily infected wards.

Another observation was made by the study of the ward maps mentioned above, which seems not to have come to the attention of former investigators.

During 1920 twenty-six cases of encephalitis lethargica were reported to the Health Department, although this disease is not included in the list of reportable diseases. There is little doubt that many more than twenty-six cases occurred in the city during the year, for one physician told the writer that he had four cases in his practice at one time. These cases had not been reported, as the physician was unaware of the desirability of reporting them.

Cases of encephalitis lethargica reported in 1920 were plotted on the same maps with the cases of poliomyelitis for the same year. The correlation between the grouping of cases of poliomyelitis and cases of encephalitis lethargica is sufficiently striking to warrant the attention of future investigators. This is most noticeable in Wards 18 and 22, two of the wards most heavily infected with poliomyelitis.

The recent work of Loew and Strauss ("Journal of Infectious Diseases," 1920), showing the similarity in the pathology and bacteriology of the two diseases, is further suggestive of an etiological relationship between poliomyelitis and encephalitis lethargica. If the possible relation of the diseases is recognized and studied further, much may be learned about the mode of transmission of both.

LABORATORY WORK.

In the hope of demonstrating whether or not the rat is capable of carrying the virus of poliomyelitis, the following experiments were carried out at the Harvard Medical School through the courtesy of Prof. M. J. Rosenau.

Twenty rats were trapped in Ward 24 along the Neponset river, where the map indicates a nest of poliomyelitis exists. The spinal cords of these rats were removed (sterile) and placed in 50 per cent glycerine for two weeks. At the end of this time the cords were macerated in physiological saline solution and 0.5 cubic centimeter of the emulsion was injected intracranially into a monkey.

On the twenty-second day after injection the monkey became very weak and refused food. The following day the weakness was extreme, and as it seemed probable that the monkey would die in the night, it was chloroformed and placed in the ice box over night. Autopsy was performed the next day. No definite paralysis was observed during life. Examination of the blood for parasites was negative. Autopsy, gross and microscopic, showed no lesions characteristic of poliomyelitis.

Eight rats (white) were injected subcutaneously with 0.1 cubic centimeter of an emulsion of fresh poliomyelitis virus (glycerinated cord) obtained from the United States Public Health Service. After two weeks four of the rats were killed with chloroform and their spinal cords removed. The cords were placed in 50 per cent glycerine in the ice box for one week, then macerated in saline solution and filtered through a Berkefeld filter. One half cubic centimeter of the filtrate was injected intracranially into a monkey. One month later the monkey and the control rats were all well.

SUMMARY AND CONCLUSION.

While the epidemiologic study of the 1920 outbreak of poliomyelitis in Boston brings to light no new data on which to base conclusions as to the mode of transmission of this disease, there are certain features of the outbreak which deserve emphasis.

(1.) In only two of the fifty cases investigated was it possible to elicit definite evidence of febrile or gastro-intestinal disturbances without paralysis in children of the family or neighborhood.

(2.) More significant information was gained by study of

ward maps on which the reported cases of 1916 and of 1920 had been plotted than by personal investigation of cases.

(3.) The correlation between the location of groups of cases of poliomyelitis and of encephalitis lethargica is sufficiently striking to warrant attention from future investigators.

If any conclusions are to be drawn from the study of the 1920 outbreak they will be based on the observation of the location of groups of cases of poliomyelitis. There is not yet sufficient evidence to assign a reason for the grouping of cases along railroad lines, waterways and partly open sewers. The two explanations which most readily suggest themselves are: (1.) The economic condition of the population residing in the localities mentioned favors overcrowding and lack of cleanliness. (2.) The localities where the cases of poliomyelitis are grouped are those in which the rat and vermin infestation would be expected to be most severe.

DISTRIBUTION OF CASES BY WARDS.

Wards.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	12.	12.	13.
Cases	11	3	2	3	6	4	8	2	11	2	6	9	4
Population (thousands)	25	44	22	19	82	39	37	40	36	27	28	31	32
Rate per 100,000	44.0	6.8	9.0	15.8	7.3	10.2	21.6	40.0	30.5	7.4	21.4	29.0	12.5

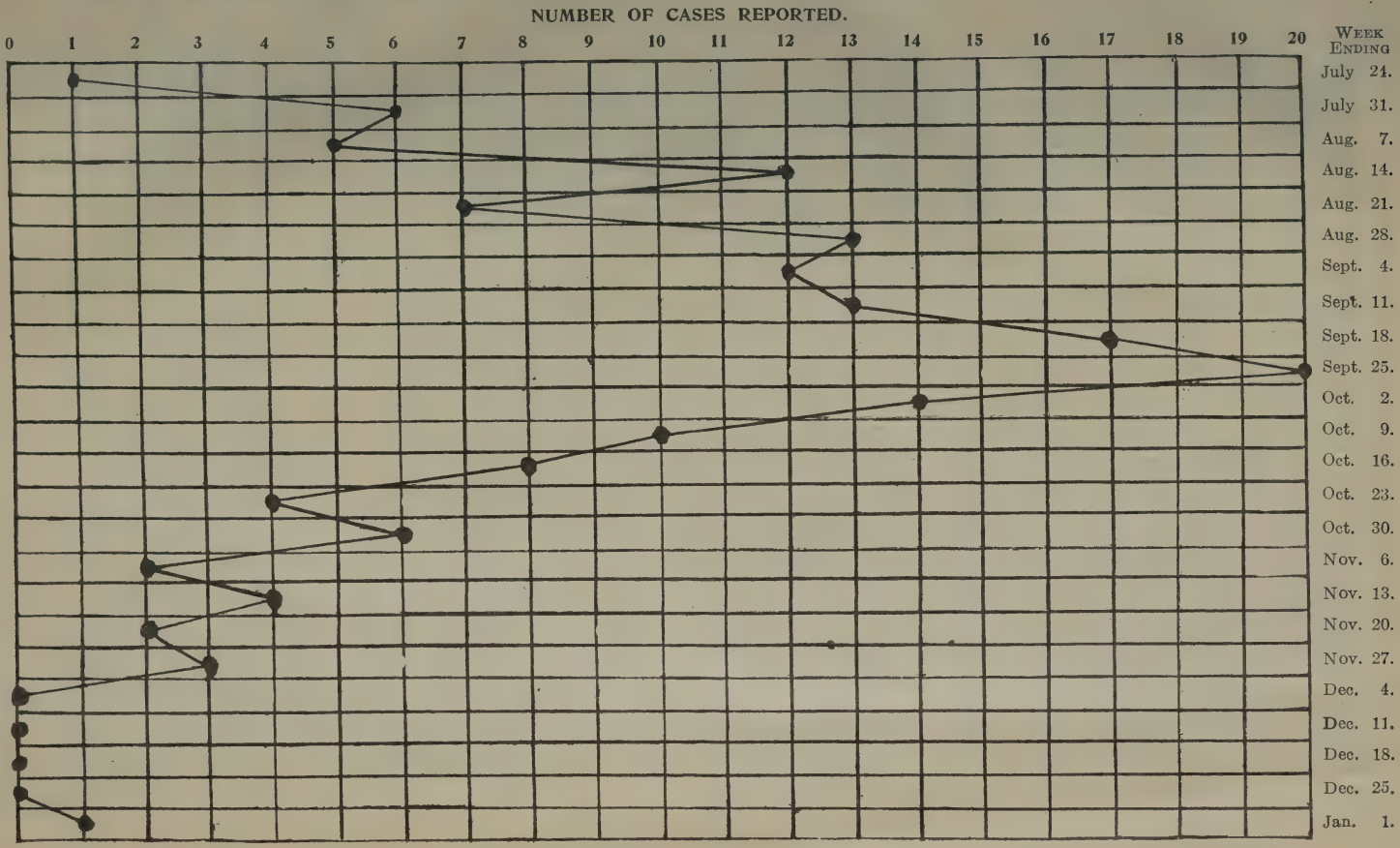
Wards.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.
Cases	6	5	1	7	6	7	12	11	8	8	7	7	6
Population (thousands)	29	27	27	27	27	24	24	28	25	22	24	17	19
Rate per 100,000	20.6	18.5	3.7	25.9	22.2	29.1	50.0	39.2	32.9	36.3	29.1	41.2	31.5

Average 21.3 cases per 100,000 population.

AGE DISTRIBUTION OF CASES.

	Cases.	Per Cent of All Cases.
Under 5 years	88	54.3
5 to 9 years	47	29.0
10 to 14 years	12	7.4
15 to 19 years	6	3.7
Over 20 years	9	5.5
Total	162	

CASES OF ANTERIOR POLIOMYELITIS REPORTED IN BOSTON FROM JULY 17, 1920, TO JANUARY 1, 1921.



AGE DISTRIBUTION OF FATAL CASES.

	Deaths.	Per Cent of all Poliomyelitis Deaths.
Under 5 years	16	51.2
5 to 9 years	5	16.1
10 to 14 years	4	12.9
15 to 19 years	3	9.7
Over 20 years	3	9.7
Total deaths	31	

MORTALITY IN VARIOUS AGE GROUPS.

	Cases.	Deaths.	Per Cent of Mortality.
Under 5 years	88	16	18.2
5 to 9 years	47	5	10.6
10 to 14 years	12	4	33.3
15 to 19 years	6	3	50.0
Over 20 years	9	3	33.3
Totals	162	31	19.7

We have heard so much concerning the value of the infant and of the obligation of parenthood that a young man or a young woman may well be appalled by these responsibilities of marriage. A more cheerful gospel, one preaching the joys of fatherhood and motherhood, and the worth of the baby, the child, and the grown son and daughter in the home, might well lessen the tendency toward unwilling maternity and elicit a more ready, vigorous and widespread response to the child welfare movement.

A wrong odor, color or taste in any foodstuff, any swelling or leakage of a can containing food, or any other sign of fermentation or decay, is a danger signal. Merely reheating the food will not make it safe; thorough cooking usually will do so, but in case of meat and fish, and in any case in which thorough cooking is impracticable, it is better to discard the food than to take the chances of botulism or other food poisoning.

SUMMARY OF THE WORK, JANUARY, 1921.

BUREAU OF ADMINISTRATION.

	Jan.	Dec.
Conferences	3	4
Hearings	2	3
Prosecutions ordered	14	29
Orders	3	5
Special drafts	6	1
Bids accepted	4	2
Premises ordered vacated	1	1

Personnel:	Jan.	Dec.
Appointments	3	0
Promotions	0	4
Suspension	0	0
Transfer of employees	0	1
Appointments made permanent	2	0
Salaries increased	1	4
Resignations	1	2
Leaves of absence granted	1	5

LICENSES, PERMITS, ETC., ISSUED.

	Jan.	Dec.
Burial permits	1,050	1,022
Disinterment permits	5	13
Undertakers' licenses	0	1
Milk licenses	150	144
Pedlers' licenses (general),	32	30
Hen licenses granted	50	51
Grease, bones, etc., licenses	70	82
Rendering licenses	0	1
Dump licenses	42	5
Permit to reoccupy	1	0
Permit to keep goats	1	0

	Jan.	Dec.
Stable permits (conditional)	0	2
Stable permits granted	1	1
Stable permits refused	0	1
Stable permits revoked	0	1
Stable hearings	0	1
Denatured alcohol licenses	5	4
Lying-in hospitals approved	2	1
Manicure-massage:		
Granted	76	44
Rejected	0	2

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Jan.	Dec.
Visits by medical inspectors	1,362	1,276
Deaths investigated	15	23
Vaccinations	4	13

	Jan.	Dec.
Vaccination certificates,	4	11
Cases brought to Boston for treatment	76	99
Antitoxin	14	21

NURSING SERVICE.

	Jan.	Dec.
Communicable disease visits	3,844	3,263
Babies visited, first visits	592	605
Revisits	2,439	1,997
Tuberculosis	122	42

HEALTH UNIT (Blossom Street).

Health Department proper:	Jan.	Dec
Vaccinations	8	10
Vaccination certificates issued	1	8
Cases visited by nurses:		
Communicable diseases	124	100
Babies	64	156
Complaints made of insanitary conditions	6	10
Totals	203	184

	Jan.	Dec.
Baby Hygiene Association:		
Babies cared for	406	406
Babies newly admitted	20	19
Babies readmitted	2	1

	Jan.	Dec.
Conferences:		
Number	4	6
Total attendance	232	356
Home visits by nurses	690	773

	Jan.	Dec.
Boston Dispensary:		
Calls by district nurses from Boston Dispensary	69	90
Consumptives' Hospital Department:		
Calls by nurses in districts	595	751
Instructive District Nursing Association:		
Visits by nurses	2,034	2,047
Jewish Welfare Nutrition Clinic:		
Attendance by babies for examination	12	20
Attendance at class for undernourished children	40	64

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Jan.	Dec.
New reports	639	576
Stores inspected	1,482	1,541
Sanitary defects remedied	128	125
Complaints at office	17	41
Referred to Sanitary Division	65	75
Milk applications approved	126	134
Pedlers:		
Applications for licenses approved	34	29
Vehicles inspected and approved	396	456
Court cases	2	42
Fines:	$5	$2,375

MARKET INSPECTION.

Condemnations.

Requested.		Without Request.	
Tomatoes	192 cans	Tomatoes	41 cans
Baked beans	2 cans	Prunes	76 pounds
Strawberries	1 can	Rabbits	18
Cherries	24 cans	Ham	5½ pounds
Dates	2,687 pounds	Poultry	45 pounds
Lettuce	2,050 pounds	Beef	126 pounds
Prunes	27 pounds	Miscellaneous meats,	344 pounds
Chestnuts	2,240 pounds	Frankfurts	4 pounds
Marmalade	5 jars	Pigs' feet	17 pounds
Preserves	12 cans	Smoked shoulder	12 pounds
Pudding	5 packages	Salt fish	4 pounds
Rice and milk	12 cans	Samples submitted for analysis to Chemical Laboratory:	
Candy	153 pounds	Oysters	3
Flour	679 pounds	Frankfurts	12
Cereal	193 pounds	Pork sausages	12
Crab meat	36 pounds	To bacteriological laboratory:	
Sardines	4 cans	Pork	48

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Jan.	Dec.		Jan.	Dec.
Cattle inspected	22	29	Sheep inspected	2	3
Calves inspected	1,106	756	Parts condemned	179	270
Swine inspected	6,923	7,383	Animals condemned	6	8

DAIRY DIVISION.

	Jan.	Dec.		Jan.	Dec.
Dairies inspected	557	305	With milk rooms	265	147
Scoring above 50 *	365	194	Without milk rooms	292	158
Scoring below 50	192	111	Inactive	19	4

* Passable mark.

BUREAU OF MILK INSPECTION.

	Jan.	Dec.		Jan.	Dec.
Chemical examinations:			Bacteriological examinations:		
Of milk	1,004	1,022	Of milk	532	540
Of ice cream	2	0	Of ice cream	0	0
Of vinegar	246	126	Court cases	0	34
Of butter and cheese	134	137	Fines	0	$750
Miscellaneous	32	19			

SANITARY DIVISION.

	Jan.	Dec.		Jan.	Dec.
Original inspections	1,134	1,142	Car reports	1,323	1,526
New reports	1,644	1,612	Complaints	692	751
Reinspections	3,358	4,561	Court cases	14	24
Legal notices served	279	261	Fines	$10	$327

HOUSING SERVICE.

	Jan.	Dec.		Jan.	Dec.
Interior rooms lighted and ventilated	14	9	Water-closets removed from cellars	5	0
Water-closets:			Water-closets on tide connected to sewer	0	6
Interior lighted and ventilated	34	35	Halls lighted	6	0
Installed	6	46	Sinks removed from halls,	0	7
Old buildings removed	9	9	Privies on wharves abolished	4	11

BACTERIOLOGICAL LABORATORY.

	Jan.	Dec.
Examinations for diagnosis and release:		
Diphtheria	2,673	1,538
Tuberculosis	377	312
Typhoid	32	49
Gonorrhea	642	610
Gonorrheal ophthalmia	49	55
Syphilis	996	934
Other examinations	* 27	† 26
Bacteriological examinations of milk	532	521

* Malaria, 6; genito-urinary T. B., 4; dark field, 1; pork for trichinosis, 14; spinal fluid for meningococci, 1; dog's head for rabies, 1.

† Malaria, 5; genito-urinary T. B., 7; paratyphoids, 8; pork for trichinosis, 3; smear for leprosy, 1; dog's head for rabies, 1; feces for intestinal parasites, 1.

VITAL STATISTICS, JANUARY, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JANUARY, 1921, WITH COMPARATIVE FIGURES FOR JANUARY, 1920.

	CASES AND DEATHS.					
	ACTUAL NUMBER.			RATE PER 1,000 POPULATION, EXCEPT WHERE OTHERWISE SPECIFIED.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
ALL CAUSES:						
Total deaths	934	1,178	—244	14.79	18.90	—3.11
Nonresidents deducted	777	1,018	—241	12.31	16.32	—4.01
BY AGE:						
Under one year	124	195	—71	1.96	3.12	—1.16
One year to four years, inclusive	35	76	—41	.55	1.21	—.66
Sixty years and over	382	406	—24	6.05	6.51	—.46
BY SPECIAL CAUSES:						
DEGENERATIVE DISEASES, SO CALLED:						
Apoplexy	63	54	+9	.99	.86	+.13
Arterio-sclerosis	47	56	—9	.74	.89	—.15
Heart disease	143	157	—14	2.26	2.51	—.25
Nephritis, chronic	55	78	—23	.87	1.25	—.28
INFANT AND MATERNAL MORTALITY:						
a. Total registered births and stillbirths	1,429	1,544	—104	22.63	24.66	—2.03
b. Registered stillbirths	52	66	—3	.82	1.05	—.23
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	36.38	42.74	—6.36
c. Deaths of mothers from causes incident to childbirth	13	16	—3	.20	.25	—.05
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.09	10.36	—1.27
d. Deaths of children in first year of life	124	195	—71	1.96	3.12	—1.16
Deaths in first year per 1,000 live births	.....	.....	.....	90.05	131.93	—41.88
VIOLENCE:						
Accidents	47	41	+6	.74	.65	+.09
Homicides	.....	5	—5	.....	.08	—.08
Suicides	5	12	—7	.07	.19	—.12
MISCELLANEOUS:						
Alcoholism, acute or chronic	4	1	+3	.06	.016	+.04
Broncho-pneumonia	55	80	—25	.87	1.28	—.41
Cancer	91	91	.....	1.44	1.45	—.01
Cirrhosis of the liver	3	1	+2	.05	.016	+.03
Diabetes mellitus	14	13	+1	.22	.21	+.01
Diarrhœal diseases, children under two years of age	7	16	—9	.11	.25	—.14

		CASES AND DEATHS.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases..	**2**	.....	+2	**.03**	.....	+.03
	Deaths.	**1**	.....	+1	**.01**	.....	+.01
Cerebro-spinal meningitis	Cases..	**5**	4	+1	**.07**	.06	+.01
	Deaths.	**1**	2	—1	**.01**	.03	—.016
Diphtheria	Cases..	**371**	214	+157	**5.87**	3.43	+2.44
	Deaths.	**9**	17	—8	**.14**	.27	—.13
Influenza	Cases..	**25**	1,865	—1840	**.39**	29.91	—29.52
	Deaths.	**4**	37	—33	**.06**	.59	—.53
Measles	Cases..	**251**	1,281	—1030	**3.97**	20.54	—16.57
	Deaths.	**3**	14	—11	**.05**	.22	—.17
Pneumonia (lobar,)	Cases..	**147**	296	—49	**2.32**	4.75	—2.43
	Deaths.	**71**	109	—38	**1.12**	1.74	—.62
Scarlet fever	Cases..	**213**	366	—153	**3.37**	5.87	—2.50
	Deaths.	**5**	12	—7	**.07**	.19	—.12
Tuberculosis (pulmonary)	Cases..	**186**	152	+34	**2.94**	2.43	+.51
	Deaths.	**57**	74	—17	**.90**	1.18	—.28
Tuberculosis (other forms)	Cases..	**28**	26	+2	**.44**	.42	+.02
	Deaths.	**9**	16	—7	**.14**	.25	—.11
Typhoid fever	Cases..	**4**	6	—2	**.06**	.09	—.03
	Deaths.	**1**	1	.....	**.01**	.016	.....
Whooping cough	Cases..	**75**	294	—219	**1.18**	4.71	—3.53
	Deaths.	**3**	18	—15	**.05**	.28	—.23

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated populations for July, 1920, and 1919, based upon the state census of 1915 and the federal census of 1920 have been used.

DEATHS AND DEATH RATES FOR CERTAIN MASSACHUSETTS CITIES, JANUARY, 1921.*

City.	Population, Estimated, July 1, 1921.†	Deaths During Week Ending					Death Rates During Week Ending				
		Jan. 29.	Jan. 22.	Jan. 15.	Jan. 8.	Jan. 1.	Jan. 29.	Jan. 22.	Jan. 15.	Jan. 8.	Jan. 1.
Boston	757,476	217	219	198	211	229	14.9	15.1	13.6	14.5	16.0
Bridgeport	149,502	37	31	25	39	38	12.9	10.8	8.7	13.6	13.8
Cambridge	110,169	35	38	22	31	27	16.5	17.9	10.4	14.7	12.9
Fall River‡	120,668	40	41	24	43	44	17.3	17.7	10.4	18.6	19.0
Lowell	113,435	41	37	40	44	37	18.8	17.0	18.4	20.2	17.2
New Bedford	125,012	32	32	28	29	21	13.3	13.3	11.7	12.1	9.0
Providence	239,645	56	68	62	78	16	12.2	14.8	13.5	17.0	16.7
Springfield	135,559	22	33	26	36	46	8.4	12.7	16.0	13.8	18.5
Worcester	184,995	52	50	50	52	40	14.7	14.1	14.1	14.7	11.6

* Figures from Weekly Health Index published by the United States Bureau of the Census.

† Figures for week ending January 1 are on basis of population for January 1, 1921, except Worcester, which is on 1920 basis.

‡ Deaths for week ending December 31, January 7, 14, 21 and 28.

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100—Main 3887.*)

Commissioner of Health.	1109 City Hall Annex.
Secretary	1108 City Hall Annex.
Medical Division	1110–11 City Hall Annex.
Health Unit	17 Blossom street.
Detention Hospital	Southampton street.
Bacteriological Laboratory	1101 City Hall Annex.
Food Inspection Division	1001A City Hall Annex.
Inspection of Foodstuffs	1001A City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1001G City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Public Health Education	1108 City Hall Annex.
Sanitary Inspection Division	1001C City Hall Annex.
Abatement of Nuisances	1001B City Hall Annex.
Housing Service	1001C City Hall Annex.
Examination of Gas Fitters	1001C City Hall Annex.
Vital Statistics Records and Accounts Division	1112 City Hall Annex.
Permits for Burial	110 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

* This number available for burial permits and for other business after regular business hours.

Office Hours.—General offices on the eleventh floor of the City Hall Annex, 9 a. m. to 5 p. m., excepting on Saturday afternoons, Sundays and holidays, for the transaction of business not specified below.

Room 110, City Hall Annex, first floor, open from 9 a. m. to 10 p. m., and Sundays and holidays from 10 a. m. to 10 p. m., for the reporting of cases of communicable diseases, the issuing of burial permits, the receiving of cultures and widals, and the receiving of complaints.

The distribution of vaccines and antitoxins will be from the laboratory between the hours of 9 a. m. and 6 p. m., excepting Saturday afternoons, Sundays and holidays.

Wassermann Tests, Etc.—The bacteriological laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday. Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

Dark Field Illumination.—The bacteriological laboratory is prepared to examine free of expense at the request of physicians lesions suspected of being syphilitic, by dark field illumination. Tests are made every afternoon between 2 and 4 p. m., except Saturdays, Sundays and holidays.

STATISTICS FOR 1920.

Population	751,251		
Live Births	19,494	Birth rate (live births)	25.94
Deaths	11,601	Death rate	15.44

The deaths and death rate stated above cover all deaths occurring in Boston, of nonresidents as well as of residents.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 10. BOSTON, FEBRUARY, 1921. NO. 2

TYPHUS FEVER—ITS NATURE AND HISTORY.

Probably the most dreaded disease in the cities of the Atlantic seaboard eighty years ago was typhus fever, or ship fever as it is commonly known because of its association with the immigrant traffic of those days. The disease was credited with a mortality as high as 80 per cent, and like yellow fever it struck terror because of the inexplicable way it spread. Just outside of Montreal there is a granite shaft which bears the following inscription: "To preserve from desecration the remains of 6,000 immigrants who died here of ship fever, A.D. 1847–8." At the Grosse Isle quarantine station below Quebec there were, the same year, about 4,500 deaths from the disease. Out of a total immigration to Canada of 106,000 during the season of 1847, about 1,200 immigrants died of typhus, either at sea or after arrival. At the quarantine station at New York, a hospital erected for the care of ship fever patients was burned by a terror-stricken mob of Staten Islanders when the first immigration commission was created by New York State; and the commission were compelled to change the location originally selected for their office, because of the fear of the neighborhood that recently landed immigrants might come to the office.

As time went on ship fever became less common, but as late as 1892 New York suffered from a serious epidemic of the disease, brought into the city by immigrants arriving on

the steamship "Marsala" from Naples and Palermo. From that time up to the time of the Balkan War little was heard of ship or typhus fever, either in this country or Western Europe, although deaths from it were recorded almost constantly in our consular reports from Russia and occasionally in those from Great Britain and other countries. But about ten years ago attention was directed to serious epidemics of a disease which the Mexicans called tarbadillo, then prevailing in the cooler highlands in the interior of Mexico. It was generally regarded as typhus fever, and in an effort to determine whether or not it was identical with the old European "ship fever" it was studied by various public health workers of this country, among whom were Anderson and Goldberger of the United States Public Health Service. They not only proved that the Mexican tarbadillo and typhus fever were identical, but following the suggestion of a French physician who had studied typhus fever in Algiers, proved that the disease was transmitted by lice. This discovery resulted from finding that monkeys were susceptible to the disease and could be infected at will by lice which had fed on human beings suffering from it. It was shown also that the reason the disease did not prevail in the hot littoral of Mexico was because the hot climate was unfavorable to the spread of lice.

For some years prior to this discovery, Doctor Brill, of Brooklyn, New York, had been calling attention to a disease frequently to be found in hospital patients in and about New York City, which was ordinarily diagnosed as mild or atypical typhoid fever but which Doctor Brill insisted was not typhoid fever at all, and as a consequence, such cases, when recognized, came to be known locally as Brill's disease. Being impressed with the similarity of the description of Brill's disease with cases of mild typhus fever, Goldberger linked up these investigations of the Mexican typhus with New York cases of Brill's disease and found that they were one and the same. Subsequent investigations have shown that instead of disappearing from the country as had been thought, the ship fever of old continued to survive unrecognized, in a mild form which had been generally mistaken for cases of mild atypical typhoid fever. Furthermore, it has appeared that this so-called Brill's disease has not been restricted to New York but that one familiar with this type of typhus fever is very likely to find unrecognized cases among the hospital patients in our large cities at any time.

After the Balkan War in 1912–13, typhus fever appeared with all its old-time virulence in all the countries involved in the conflict, and from Eastern Mediterranean seaports the disease found its way to America in spite of our complete knowledge of its manner of transmission and notwithstanding such measures as were put into effect at foreign ports and our own ports of entry to prevent the introduction of the disease. No epidemics, however, occurred here, and so far as known but few secondary cases resulted from infected lice which managed to get into the country.

Soon after the beginning of the recent World War serious epidemics of typhus were reported from various parts of Eastern Europe, and the attention of this country was particularly directed to resulting conditions in Serbia when prominent American sanitarians went to take part in the fight against the disease. Throughout the war, however, in spite of the general lousiness of the soldier, the armies of all combatants on the Western front apparently managed to keep free from typhus fever. On the Eastern front serious outbreaks of typhus fever occurred in the armies and the disease in a very fatal form was undoubtedly widespread in the civil population of Russia. That it is still widespread there cannot be doubted. With the resumption of commerce with countries within the danger zones of Europe, and diminished governmental control there, both civil and military, we must not be surprised if we see cases of the old-fashioned fatal form of typhus fever occur in our American cities. The extent to which it will spread will then depend largely upon the ability of the average practising physician to recognize a case of typhus fever when he sees one.

That the average physician should give more thought to the probability of encountering cases of typhus fever is shown not only by the long unrecognized nature of Brill's disease but by the following specific incidents:

A few years ago a recently arrived immigrant was admitted to a hospital in one of our cities and his sickness diagnosed as pneumonia. About three weeks later three employees of the hospital, who had been taken sick in the meantime, were discovered to have typhus fever. Two of them died. These employees had not come in contact with the patient mentioned but had worked in the storeroom where his clothes had been placed. Investigation made it certain that this patient had really had typhus fever and that the employees had been

infected by lice which had crawled away from his clothes in the storeroom.

About a year ago, a man, a junk dealer, long a resident of an adjoining city, was admitted to a Boston hospital with typhus fever, from which disease he died. The source of his infection was never discovered, yet the occurrence of this case makes it certain that there must have been at least one other unrecognized case of typhus fever of a similar type in this vicinity, and in all probability more than one.

Typhus fever is a disease which any practising physician in this city is liable to meet now at any time, in either a mild or virulent form. The fact that it was not until about the middle of the last century that typhoid and typhus fevers were definitely identified as different diseases shows that typhoid fever is probably the disease most likely to be mistaken for typhus fever today. Both the eruption and the mental symptoms of typhus may, however, cause it to be excusably mistaken for cerebro-spinal meningitis. Typhus fever has also more than once been mistaken for pneumonia. In the classical differential diagnosis emphasis is laid on the character of the typhus eruption, but spots of a not pronounced petechial character such as may be seen especially in mild cases of typhus may be practically indistinguishable from an eruption to be found in various other conditions. A diagnosis of typhus fever should rest on the symptom complex as a whole, but the possibility of typhus should not be forgotten in a patient in whose case typhoid fever may at first be suspected but who does not look, act or smell like a case of typhoid fever. In such a case the absence of splenic enlargement, and later a persistently negative widal reaction are more than suspicious. The Weil-Felix reaction may then serve as the determining fact in fixing the diagnosis as typhus fever.

The danger of the spread of typhus fever comes more from the patients' clothes than from the patient himself. While head lice are capable of transmitting typhus as well as body lice, the greater danger comes from the latter since they live chiefly in the clothing and will actively seek other warm human hosts after the clothes are moved from the patient. No contagious disease can be controlled if precautionary measures are postponed until a positive diagnosis can be made, and the possibility of dangerous vermin in the clothing of a patient himself or of his family should be kept in mind in all cases of sudden sickness the nature of which is in any way obscure.

BOSTON'S CHILD WELFARE EXHIBIT.

The Child Welfare Campaign, conducted in Boston during the week beginning February 6, under the auspices of the Public Health Committee of the City Federation, was a marked success. The campaign emphasized the fact that properly applied publicity will promote interest in the public health. A distinct earnestness was shown by the many visitors to the exhibit and in the lectures on various phases of child health. The committee has since received a large number of requests for advice and information from many cities and states desirous of carrying out a similar program. The campaign probably scored its greatest success in demonstrating that official health departments, churches, public and parochial schools, hospitals and all unofficial health agencies can be brought together on the common basis of the welfare of the child—without the slightest friction among such organizations. The general committee, made up of representatives of such agencies and responsible for the success of the Boston Health Week, is convinced that much benefit was derived from the campaign and will continue a permanent Child Welfare Exhibit Committee. It has affiliated with the Boston Health League with a view to projecting itself further into public health work without the possibility of duplication of effort.

The Child Welfare Exhibit consisted of everything obtainable to demonstrate the resources of the city directed toward the upbuilding of child life and prevention of disease. Dental, sight-saving and nutritional clinics were important features. Exhibits showing improper and proper homes for the baby, demonstrations on bathing and feeding the baby and the feeding and clothing of older children proved of great interest to parents. The "Health Center," equipped with physicians, nurses, social worker and oral hygienist, was patronized by mothers having children to be examined or measured, or desiring information. If little Tommie was here found to be under weight, the social worker escorted the mother to the "Food Exhibit," where she was shown many ways of preparing food attractive to the child. Another feature of the "Health Center" was an information department, where mother was informed where to take Tommie from time to time, the name of the hospital, the time of clinics, how to get there, etc. She also received many interesting pamphlets and a list of selected books to read. The "Foreign Table," under the direction of

a qualified worker with aliens, who collected everything possible in foreign literature on health, was a source of much valuable information. "Ask the nurse" was a caption meeting the eye everywhere in the exhibit halls, and the reticent mother was soon made to feel interested and at ease. The "Nursery," under the supervision of a trained teacher, was well patronized. Mother left here her baby and perhaps little Susie while going the round of exhibits or attending one of the lectures, or witnessing a demonstration on some feature of child care, or seeing a moving picture to interest and bring new light on the public health nurse, or health exercise demonstrations of some one of the many organizations giving an ideal of health achievement. "Children's Day" was attended by 2,500 Boston school children, and prizes were awarded by the Boston *Record* to the best essay on what they had seen and heard. The decorations by the art students of the School of the Museum of Fine Arts added much to the harmony and general effect of the exhibit. Music was contributed freely by prominent musicians.

The Federation Committee feel that the active co-operation of the City and State Departments of Health gave it the courage of its convictions at the onset of the undertaking, and was largely responsible for the splendid team-work of the committee as a whole.

THE TYPHUS FEVER OUTLOOK IN BOSTON.

In February public apprehension began to manifest itself that Boston might be in danger of an epidemic of typhus fever. This feeling was due to several factors. The prevalence of typhus fever in parts of Europe whence people were continually coming to this country was being given wide publicity in the newspapers. It was made known that precautions in vogue at certain European seaports were failing to prevent cases of the disease from developing on ships bound to this country. The New York Health Department was complaining that those responsible for sanitary precautions with respect to the passengers or crews of ships arriving at that port were failing to prevent the introduction of cases of the disease into the city. The quarantine facilities at New York were proving inadequate to handle arriving passengers without detaining ships with all on board for days and to avoid such detentions of ships with consequent derangement of sailing schedules steamship companies began diverting their

ships to Boston. When these ships began to arrive at Boston it became apparent that the local Federal quarantine station here had a maximum capacity for the detention of only about 1,200 passengers under the most favorable circumstances, while arriving ships were bringing in nearly 2,000 persons, exclusive of crews, and that the personnel of the quarantine station was likewise inadequate to meet the task being placed upon it.

Although not given equal publicity, an equal if not greater cause for apprehension might have been found in the fact that the Boston Health Department had available no provision for the care or treatment of typhus fever cases, suspects or contacts, except such facilities as were offered by the Southampton Street Detention Hospital. This building also offered the only facilities available for the care of smallpox or leprosy cases. It consists of two small hospital wards. It is without any isolation or observation rooms whatever. It had no bathing facilities except the bathtubs in connection with the wards. It had a small compartment available for sulphur or formaldehyde fumigation and an antiquated steam sterilizing chamber.

The probability of the introduction of typhus fever from abroad was markedly decreased by the action of the Federal Government, requiring both the delousing and the detention for twelve days of passengers on ships from foreign ports where the sanitary measures with respect to the delousing and detention of prospective passengers were not satisfactory to the United States medical officers stationed at such ports. The personnel of the Federal quarantine station at Boston was increased with respect both to medical officers and attendants. Through the co-operation of the City of Boston and the steamship companies, provision was made both at Deer Island and Rainsford Island for the detention of arriving passengers, thereby obviating to some extent the necessity for the detention of incoming ships.

With a view to meeting the possible occurrence of typhus fever cases in the city the Health Department installed shower baths and dressing and undressing facilities in the steam sterilizer shed at the Detention Hospital and put the steam sterilizer itself into good order. Gasolene soap, spraying apparatus, clothing and receptacles for insecticide solutions and bags for possibly infested clothing were also provided to an extent deemed sufficient to make it practicable to delouse persons at the Detention Hospital and to clean up premises in

which occasional cases of typhus might occur in the city. An investigation was made of the public baths and lodging houses with a view to devising methods for delousing or at least preventing the spread of lice among patrons of such places, and some recommendations were made, although it was concluded that in the absence of cases of typhus in the city it was inadvisable to put into effect more stringent measures than were already being generally observed for the protection of patrons of these places.

A circular letter, a copy of which is printed below, was sent to all the physicians in the city calling attention to the possibility of the occurrence of cases of typhus fever, describing the clinical symptoms of the disease and notifying them that diagnostic assistance would be promptly furnished them without charge on request in any suspicious case. The Health Department laboratory was equipped to do the Weil-Felix reaction and the regular medical staff was supplemented by the employment of a physician who had recently had wide clinical experience with typhus fever in Europe.

Thus far no case of typhus fever has been discovered in Boston this year.

CIRCULAR LETTER IN RE TYPHUS.

Typhus Fever Warning.

BOSTON HEALTH DEPARTMENT,
BOSTON, FEBRUARY 24, 1921.

DEAR DOCTOR,—At the present time people are constantly coming to this country from parts of Europe where typhus fever is prevalent. In spite of the precautions of the Federal quarantine authorities, both abroad and at our own seaports, cases of typhus fever, probably due to recently imported infection, have occurred among the resident population of New York City and of other places. It is, therefore, not improbable that cases of the disease may be found in Boston, either among recently arrived immigrants or the permanent population. In such an event the prevention of a serious outbreak here of the virulent type of the disease, now common in Eastern Europe, may depend upon the prompt recognition of any case of the disease in this city.

Physicians should, therefore, keep constantly in mind at the present time the possibility of typhus fever, in all cases of an acute illness with sudden onset, high temperature, marked prostration, ocular congestion, severe headache and mental apathy, in which the diagnosis may be in doubt, particularly if a dark "rose spot" or petechial eruption appears a few days after onset of illness. In any case in which a suspicion of typhus fever arises, you are requested to notify the Health Department at once. If desired, diagnostic assistance in any such case will be promptly furnished you without charge. Should you desire such assistance telephone Fort Hill 5100, Health Department,

Medical Division, between the hours of 9 a. m. and 5 p. m., daily, and Saturday until 1. At all other times call Main 3887.

That the diagnosis of a case of typhus fever may not be easy is indicated by the fact that typhus fever of a mild type (Brill's disease) is endemic in this country and that it existed for many years before its true character was recognized, cases being usually mistaken for atypical typhoid fever. Experience has shown also that typhus fever may be mistaken for cerebro-spinal meningitis, pneumonia or influenza.

Since typhus fever has been seldom seen by physicians in this city, it may not be improper to remind you of the characteristic symptoms of a typical case.

Symptoms.—The main symptoms are sudden onset with severe headache; high temperature, of 103 degrees to 105 degrees, and fall by rapid lysis to normal in about two weeks; pulse rapid, from 100 to 120; the tongue at first has a white coat, which rapidly becomes brown and very dry, with sordes on the teeth; bowels are constipated; delirium is a common symptom. The headache usually persists with the fever, and is frontal and severe in character. The expression is dull; eyes are congested; respiration is rapid; spleen is enlarged. The eruption usually appears on the third to the fifth day. The spots are smaller than those of measles, are distributed over the covered portion of the body chiefly, and may appear on the hands and feet, but rarely appear on the face. The spots are red at first and then of a dirty bluish color. On the third or fourth day of the eruption there is extravasation of blood into the lesions which form dark colored spots underneath the skin. The eruption becomes of a darker color as it becomes older. The eruption is one of the best differential guides.

In mild cases the symptoms described above may be so modified as to cause the difficulty in diagnosis already referred to.

Needless to say, all suspicious symptoms assume a graver aspect if they occur in a person recently arrived in this country from abroad, or in a person known to have been exposed to infection.

Diagnosis by the Agglutination Test.—Weil-Felix Reaction.—The Bacteriological Laboratory of the Boston Health Department is prepared to examine blood specimens from cases suspected to be suffering from typhus fever. This reaction, while not specific in character, is fairly reliable. The reaction appears during the first week of the disease and becomes quite marked during the second week and during convalescence.

Directions for Taking and Forwarding Specimens to Laboratory.—Procure a specimen of blood in a manner similar to obtaining a specimen for widal examination, using a similar outfit. Dry the specimen in the air, and forward it to laboratory through mail or by special messenger.

Age Period.—The disease is usually found in adults and seems to be rare in children under five years.

Cause of Disease.—The disease is presumably due to an organism, which is to be seen in infected lice and in the lesions of the disease, but which has not yet been artificially cultivated.

Mode of Transmission.—It has been well established that the disease is transmitted by body lice and by head lice, and apparently is not spread in any other manner. The lice become infected by feeding on persons infected by typhus fever and become themselves carriers

of the disease. Where lice are abundant there is the greatest danger of the disease being spread. Overcrowding, uncleanliness and poor sanitary conditions favor the spread of typhus fever, because these conditions are favorable for the distribution of lice from person to person.

Treatment.—There is no specific treatment. Patient suffering from typhus fever will not be allowed to stay at home, but will be removed to a hospital. Contacts will be thoroughly deloused, together with such articles or clothing as the Health Department may deem necessary. The premises will be deloused. Contacts after delousing will be kept under supervision of the Health Department until all danger of infection has passed.

WM. C. WOODWARD,
Health Commissioner.

WHAT SKIMMED MILK DID TO JERSEY MILK.

Back in the country, and in another state, there are in a certain district several herds of Jersey cows.

The milk from these cows has been sold in Boston for some time. So far as the cows knew the milk was being distributed here the way they gave it. But the cows, if they thought of the matter, failed to consider the human element.

Their milk as it left the farms contained at least 4.0 per cent of fat. But it went from the farms to a country creamery, the proprietor of which had a contract to sell a Boston milkman a commodity containing 3.7 per cent of fat. So at the creamery skimmed milk was added in order that the product when it reached this city might not rise above the requirements of the contract.

The Boston milkman then took the milk to his plant, pasteurized and bottled it. What else occurred while under the dealers' control is left for the reader's imagination, but official samples procured from certain of the dealers' bottles contained only the following amounts of fat: 3.51 per cent, 3.50 per cent, and 3.44 per cent. They showed, of course, the presence of skimmed milk. Prosecutions followed and substantial fines were imposed.

This story has some elements of a fairy tale, but it is founded on fact, a recent Boston happening. The information relative to the early history of this milk was only recently known.

MORAL: DON'T BLAME THE JERSEY COW.

DISTRIBUTION OF DIPHTHERIA ANTITOXIN.

Physicians may now obtain diphtheria antitoxin, vaccine, etc., at City Hall Annex, up to 10 p. m. daily, including Sundays and holidays, in Room 110, on the first floor, if the Bacteriological Laboratory on the eleventh floor is closed.

SUMMARY OF THE WORK, FEBRUARY, 1921.

BUREAU OF ADMINISTRATION

	Feb.	Jan.
Conferences	2	3
Hearings	2	2
Prosecutions ordered	4	14
Orders	4	3
Special drafts	0	6
Bids accepted	1	4
Premises ordered vacated	0	1

	Feb.	Jan.
Personnel:		
Appointments	1	3
Appointments made permanent	1	2
Salaries increased	0	1
Resignations	1	1
Leaves of absence granted	1	1

LICENSES, PERMITS, ETC., ISSUED.

	Feb.	Jan.
Burial permits	996	1,050
Disinterment permits	5	5
Milk licenses	103	150
Pedlers' licenses, general	55	32
Hen licenses granted	32	50
Grease, bones, etc., licenses	66	70

	Feb.	Jan.
Dump licenses	10	42
Stable permits	0	1
Denatured alcohol licenses	13	5
Lying-in hospitals approved	0	2
Manicuring-Massage:		
Granted	19	76

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Feb.	Jan.
Visits by medical inspectors	1,921	1,362
Deaths investigated	23	15
Vaccinations	7	4

	Feb.	Jan.
Vaccination certificates	7	4
Cases brought to Boston for treatment	133	76
Antitoxin administered	26	14

NURSING SERVICE.

	Feb.	Jan.
Communicable disease visits	3,402	2,844
Babies visited, first visits	999	592
Revisits	1,354	2,439
Tuberculosis	12	122

HEALTH UNIT (BLOSSOM STREET).

Health Department proper:	Feb.	Jan.
Vaccinations	4	8
Vaccination certificates issued	3	1
Cases visited by nurses:		
Communicable diseases	185	124
Babies	148	64
Complaints received of insanitary conditions	6	6
Total	346	203

	Feb.	Jan.
Baby Hygiene Association:		
Babies cared for	407	406
Babies newly admitted	19	20
Babies readmitted	1	2

	Feb.	Jan.
Conferences:		
Number	6	4
Total attendance	289	232
Home visits by nurses	585	690

	Feb.	Jan.
Boston Dispensary:		
Calls by district nurses from Boston Dispensary	82	69
Consumptives' Hospital Department:		
Calls by nurses in district	909	595
Instructive District Nursing Association:		
Visits by nurses	1,873	2,034
Jewish Welfare Center, Nutrition Clinic:		
Attendance by babies for examination	44	12
Attendance at class for undernourished children	60	40

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Feb.	Jan.
New reports	990	639
Stores inspected	1,722	1,482
Sanitary defects remedied	87	128
Complaints at office	20	17
Referred to Sanitary Division	44	65
Milk applications approved	109	126
Pedlers:		
Applications for licenses approved	55	34
Vehicles inspected and approved	390	396
Court cases	17	2
Fines	$270	$5

CONDEMNATIONS.

	Requested.		Requested.
Walnuts	68 pounds	Flour sweepings	634 pounds
Peas	198 cans	Pepper	9 cans
Tomato paste	16 pounds	Allspice	6 cans
Tapioca	135 pounds	Cocoa	9 cans
Corn meal	8 packages	Dates	3 packages
Corn	3 cans	Raisins	17 packages
Jelly	32 pounds	Salt	5 packages
	and 71 packages	Macaroni	65 pounds
Pickles	45 bottles	Crisco	2 cans
Dried fruit	46 pounds	Condensed milk	26 cans
Flour	19,769 pounds	Evaporated milk	73 cans
Puffed wheat	26 packages	Chocolate	3 cakes
Puffed rice	3 packages	Olives	15 cans
Farina	15 packages	Salad dressing	1 bottle
Shredded wheat	6 packages	Mixed vegetables	1 can
Quaker oats	6 packages	Grape juice	1 barrel
Corn flakes	2 packages	Candy	403 pounds
Baking powder	63 cans	Hash	4 cans
Syrup	31 cans	Corned beef	1 can
Tea	11 packages	Potted meat	1 can
Marshmallow cream	6 cans	Lamb	25 pounds
Soup	2 cans	Clams	1 can
Cheese	420 pounds	Anchovies	10 cans
Corn starch	42 pounds	Herring	18 jars
Succotash	3 cans		1,190 pounds
Tomatoes	221 cans		3 cans

CONDEMNATIONS.

Without Request.		Without Request.	
Eggs	7,110 dozen	Puritan boiled hams	77 pounds
Candy	225 pounds	Dried beef outsides	758 pounds
Tomatoes	25 cans	Rex bacon	570 pounds
Herring	300 pounds	Rex sausage	1,050 pounds
Sheep hanks	1,441 pounds	Rex frankfurts	3,555 pounds
Sheep rings	13,850 pounds	Bologna	522 pounds
Beef rounds	590 pounds	Blood pudding	251 pounds
Beef bungo	1,260 pounds	Minced ham	624 pounds
Beef middles	277 pounds	Corned beef	23 pounds
Hog casings	293 pounds	Pressed ham	724 pounds
Weasands	508 pounds	Hog bungs	500 pounds
Cow meat	5,794 pounds	Beef plates	1,200 pounds
Bull meat	8,215 pounds	Beef trimmings	867 pounds
Beef trimmings	500 pounds	Beef stickers	633 pounds
Shank meat	4,000 pounds	Beef rattles	101 pounds
Rattle trimmings	403 pounds	M. G. sausages	100 pounds
Frozen bull meat	1,610 pounds	Cloves	30 pounds
Rattle meat	525 pounds	Cinnamon	135 pounds
Broken sausage	995 pounds	Garlic	75 pounds
Tongue trimmings	450 pounds	Margarian	100 pounds
Pork trimmings	2,480 pounds	Nutmeg	310 pounds
Lean trimmings	1,370 pounds	Onions	1½ crates
Pork cheeks	1,646 pounds	Paprika	222 pounds
Blade meat	3,229 pounds	White pepper	380 pounds
Spare ribs	125 pounds	Black pepper	53 pounds
Hog livers	120 pounds	Pickles	50 pounds
Hog kidneys	35 pounds	Sage	160 pounds
Pork loins	750 pounds	Saltpetre	1,725 pounds
Beef hearts	327 pounds	Salt	1,450 pounds
Beef livers	428 pounds	Seasoning	220 pounds
Veal loins	30 pounds	Carraway seed	75 pounds
Puritan hams	79 pounds	Ginger	100 pounds
Dried beef insides	951 pounds	Flour	3,300 pounds
Rex skin hams	20 pounds	Ketchup	90 dozen bottles

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Feb.	Jan.		Feb.	Jan.
Cattle inspected	14	22	Sheep inspected	2	2
Calves inspected	2,209	1,106	Parts condemned	97	179
Swine inspected	4,790	6,923	Animals condemned	5	6

DAIRY DIVISION.

	Feb.	Jan.		Feb.	Jan.
Dairies inspected	507	557	With milk rooms	264	265
Scoring above 50*	322	365	Without milk rooms	243	292
Scoring below 50	185	192	Inactive	23	19

BUREAU OF MILK INSPECTION.

	Feb.	Jan.		Feb.	Jan.
Chemical examinations:			Of butter and cheese,	9	134
Of milk	1,017	1,004	Miscellaneous	22	32
Of ice cream	0	2	Bacteriological examinations:		
Of vinegar	165	246	Of milk	574	532

* Passable mark.

BACTERIOLOGICAL LABORATORY.

Examinations for diagnosis and release:

	Feb.	Jan.
Diphtheria	2,138	2,673
Tuberculosis	271	377
Typhoid	47	32
Gonorrhea	646	642
Gonorrheal ophthalmia	53	49
Syphilis	988	996
Other examinations	17*	27†
Bacteriological examinations of milk	574	532
Examination of rats	1,479	0

SANITARY INSPECTION.

	Feb.	Jan.		Feb.	Jan.
Original inspection	781	1,134	Car reports	1,314	1,323
New reports	1.236	1,644	Complaints	596	692
Reinspection	3,980	3,358	Court cases	7	14
Legal notices served	214	279	Fines	$40	$10

HOUSING SERVICE.

	Feb.	Jan.		Feb.	Jan.
Interior rooms lighted and ventilated	8	14	Old buildings demolished	8	0
Water-closets:			Old buildings removed	0	9
Interior lighted and ventilated	27	34	Halls lighted	0	6
Newly installed	5	6	Houses vacated	2	0
Removed from cellars,	0	5	Privies abolished	2	0
			Privies on wharves abolished	0	4

*Malaria, 4; celery, for mold, 1; dark field illumination, 2; genito-urinary T. B., 1; cultures for virulence, 6; blood for paratyphoids, 2; tomato paste for poison, 1.

†Malaria, 6; genito-urinary T. B., 4; dark field, 1; pork for trichinosis, 14; spinal fluid for meningococci, 1; dog's head for rabies, 1.

REGISTRATION OF BAKERIES.

Since the registration of bakeries started on February 1, 1921, and up to February 14, 1921, inclusive, about 550 places classed as bakeries under chapter 94, General Laws, have been registered. This registration has been in duplicate, one copy being retained by this department and one sent to the State Department of Public Health. Of these bakeries, seventy-seven were manufacturing bakeries, where bread, cake, pies or other bakery products are produced. The remainder represents places where bakery products are sold, but not produced. About forty places were found defective and put under notice.

VITAL STATISTICS, FEBRUARY, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING FEBRUARY, 1921, WITH COMPARATIVE FIGURES FOR FEBRUARY, 1920.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	871	1,812	—941	13.79	28.94	—15.15
Nonresidents deducted	721	1,630	—909	11.41	26.03	—14.62
By Age:						
Under one year	124	249	—125	1.96	3.97	—2.01
One year to four years, inclusive	59	152	—93	.93	2.42	—1.49
Sixty years and over	322	509	—187	5.10	8.13	—3.03
By Special Causes:						
Degenerate Diseases, so Called:						
Apoplexy	60	69	—9	.95	1.10	—.15
Arterio-sclerosis	46	68	—22	.72	1.08	—.36
Heart disease	114	203	—89	1.80	3.24	—1.44
Nephritis, chronic	41	55	—14	.64	.87	—.23
Infant and Maternal Mortality:						
a. Total registered births and stillbirths	1,444	1,646	—202	22.87	26.29	—3.42
b. Registered stillbirths	48	73	—25	.76	1.16	—.40
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	33.24	44.34	—11.10
c. Deaths of mothers from causes incident to childbirth	7	13	—6	.11	.20	—.09
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	4.84	7.89	—3.05
d. Deaths of children in first year of life	124	249	—125	1.96	3.97	—2.01
Deaths in first year per 1,000 live births,	.....	.....	.....	88.82	158.29	—69.47
Violence:						
Accidents	37	43	—6	.58	.68	—.10
Homicides	3	1	+2	.04	.01	+.03
Suicides	7	9	—2	.11	.14	—.03
Miscellaneous:						
Alcoholism, acute or chronic	5	.....	+5	.08	.....	+.08
Broncho-pneumonia	30	188	—158	.47	3.00	—2.53
Cancer	91	76	+15	1.44	1.21	+.23
Cirrhosis of the liver	8	6	+2	.12	.09	+.03
Diabetes mellitus	15	21	—6	.23	.33	—.10
Diarrhœal diseases, children under two years of age	7	18	—11	.11	.28	—.17

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	2	.....	+2	.03	.....	+.03
Deaths.	.....	.....	.....	.....	.....	.....
Cerebrospinal meningitis.....Cases..	.....	5	—5	.....	.07	—.07
Deaths.	1	2	—1	.01	.02	—.01
Diphtheria.....Cases..	283	187	+96	4.48	2.98	+1.50
Deaths.	20	15	+5	.32	.24	+.08
Influenza.....Cases..	35	6,083	—6,048	.55	97.16	—96.61
Deaths.	2	400	—398	.03	6.38	—6.35
Measles.....Cases..	358	1,134	—776	5.67	18.11	—12.44
Deaths.	9	9	.....	.14	.14	.....
Pneumonia (lobar).....Cases..	131	445	—314	2.07	7.11	—5.04
Deaths.	53	192	—139	.83	3.06	—2.23
Scarlet Fever.....Cases..	305	247	+58	4.83	3.94	+.89
Deaths.	3	11	—8	.04	.17	—.13
Tuberculosis (pulmonary).....Cases..	178	164	+14	2.81	2.61	+.20
Deaths.	69	111	—42	1.09	1.77	—.68
Tuberculosis (other forms).....Cases..	38	22	+16	.60	.35	+.25
Deaths.	11	10	+1	.17	.16	+.01
Typhoid fever.....Cases..	11	3	+8	.17	.04	+.13
Deaths.	1	.....	+1	.01	.....	+.01
Whooping cough.....Cases..	86	309	—223	1.36	4.93	—3.57
Deaths.	5	25	—20	.08	.39	—.31

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated populations for February, 1921, and 1920 based upon the state census of 1915 and the federal census of 1920 have been used.

DEATHS AND DEATH RATES FOR CERTAIN NEW ENGLAND CITIES, FEBRUARY, 1921. *

City.	Population Estimated July 1, 1921.	Deaths During Week Ending				Death Rates During Week Ending			
		Feb. 26.	Feb. 19.	Feb. 12.	Feb. 5.	Feb. 26.	Feb. 19.	Feb. 12.	Feb. 5.
Boston	757,634	213	222	201	231	14.7	15.3	13.8	15.9
Bridgeport	149,967	35	26	31	41	12.2	9.0	10.8	14.3
Cambridge	110,444	30	42	22	44	14.2	19.8	10.4	20.8
Fall River	120,668	†34	†40	†39	†48	14.7	17.3	16.9	20.7
Lowell	113,757	26	34	28	34	11.9	15.6	12.8	15.6
New Bedford	125,012	29	23	48	25	12.1	9.6	20.0	10.4
Providence	239,645	65	68	68	79	14.1	14.8	14.8	17.2
Springfield	135,877	34	42	35	31	13.0	16.1	13.4	11.9
Worcester	184,972	55	49	52	44	15.5	13.8	14.7	12.4

* Published by the weekly Health Index of the United States Bureau of the Census.
† Deaths for weeks ending February 4, 11, 18 and 25.

CITY OF BOSTON
PRINTING DEPARTMENT

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

OCT 3 1921 B. P. L.

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 10. BOSTON, MARCH, 1921. NO. 3

LAYMEN IN PUBLIC HEALTH WORK.

Public health work is so largely influenced—it may almost be said dominated and controlled—by the laity, organized into many special and uncorrelated or imperfectly correlated groups, local, national, and even international, that it is no small wonder that many in the medical profession view the future with no little concern. These organizations are themselves but the offspring of public opinion, and they are found in the long run to influence public opinion. Such being the case, no one can gainsay the fact that lay organizations for the protection and promotion of public health—meaning thereby organizations into which the physician enters on the same basis as a layman—are bound materially to influence the future evolution of the medical profession, for good or for ill.

That any intelligent body of laymen, organized for the protection and promotion of public health, should willingly do anything that jeopardizes the future development of the medical profession along the lines that are designed to protect and promote public health is unbelievable; if the activities of any such group tend toward that end it is certainly through inadvertence or because of ignorance or unwitting error of judgment; or otherwise the group would be working toward the defeat of its own ends. In no way can such conditions be counteracted or corrected better than by the activities of the organized medical profession itself.

Unfortunately the organized medical profession as represented by the great national, state and county societies has either not concerned itself with the situation at all or else has not fully occupied the field, so that physicians who have

interested themselves with respect to the situation have done so even as individuals or in small groups that can hardly be said to represent fairly the medical profession at large; and too often the cause of the medical profession generally has been injured by the tactics of such detached workers and detached groups. It may well be urged, therefore, that the profession as a whole undertake seriously a study of the causes of existing conditions in so far as they may be liable to react harmfully on the future development of the medical profession, adopt a program of its own that is designed to correct such evils as may now exist, to prevent similar evils or others in the future, and devise proper agencies to procure the adoption of such a program by the laymen and lay-organizations operating in the field of public health.

A need for such action by the medical profession has been made more urgent yet at the same time this task has been made easier by the recent culmination of plans long under way looking towards the co-ordination if not the consolidation of the more important organizations devoted to the protection and promotion of public health. Practically all of the more important national organizations of this character are now co-ordinating their work through a representative council, the National Health Council, and have established their headquarters together in the building in New York City. The organizations devoted primarily to the welfare of children have similarly co-ordinated in the National Child Welfare Association. Movements of like character have been begun looking toward the co-ordination or consolidation of municipal groups, the organization in Boston being at present under the leadership of the Boston Health League.

The Boston Health League is the outgrowth of a desire on the part of the *twenty-five agencies affiliated with it to pro-

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* Baby Hygiene Association.
Department of Medical Inspection, Boston, Boston Dispensary.
Boston Metropolitan Chapter, American Red Cross.
Catholic Charitable Bureau.
Children's Hospital, Social Service Department.
Hawthorne Club.
Instructive District Nursing Association.
Lincoln House.
Massachusetts Homeopathic Hospital, Social Service Department.
Massachusetts Department of Public Health.
Neighborhood Kitchen.
Women's Municipal League, Public Health Department.
Boston Health Department.
Boston Consumptives' Hospital Trustees.
Boston Floating Hospital.
Boston Tuberculosis Association.
Child Health Exhibit Committee.
Dietetic Bureau (affiliated with Baby Hygiene).
Household Nursing Association.
Jewish Maternity Clinic Association.
Massachusetts General Hospital, Social Service Department.
Massachusetts Society for Social Hygiene.
Maverick Dispensary.
Peter Bent Brigham Hospital, Social Service Department.

cure the greatest possible efficiency and economy in the development and dispatch of public health work. The Health League is not a new agency in the field of public health but simply an agency established by the organizations interested in the league for the purpose of developing more efficient and economical methods of public health work, having in mind, too, the curtailing of any unnecessary activities, the prevention of duplication, and the development of methods for the covering of such needs as may be found not to be fully met. That the league would thwart its own purposes and ultimately defeat its own ends by any activity attempted to arouse justily the opposition of the organized medical profession, and to present the best possible development of the practicing physicians in the field of public health must be apparent to all.

In order that the work of the Health League might proceed on a sound basis, its activities for the present have been more or less localized. It stands ready, of course, as the agent of the several constituent organizations identified with it to aid them in co-ordinating or consolidating their work and in increasing efficiency and economy within their own special fields. But its primary purpose is to select a limited portion of the City of Boston and there to make an intensive study co-operating with the medical profession and others interested in the health of that particular portion of the city, to determine what the public health needs are and how well they are being met and to endeavor sincerely to adjust the agencies already working in the field to meet the needs opportunely, reinforcing and supplementing those agencies in so far as may be necessary.

The work that is to be undertaken calls for the expenditure of some money, and for the present the needs of the league have been met through the generosity of the Metropolitan Chapter, American Red Cross, and the generosity of certain of the agencies identified with the league, which have agreed to place under the direction of the league within the area selected for investigation and demonstration such of their field agents as are active there.

The operations of the Boston Health League should receive the hearty support of the organized medical profession of the city and will be watched with interest especially by all who are engaged in public health work in Boston and elsewhere.

TWO CASES OF SMALLPOX REPORTED.

During the month there have been reported to this department two cases of smallpox, namely, John Handrahan, age 31, residing at 25 Worcester square, Boston, and Walter W. Clay, age 48, residing at 15 Bickerstaff street, Boston. Neither patient had ever been vaccinated. Mr. Handrahan had not been out of the city during the past six months, but Clay had been on a visit to Columbus, Ohio, on February 19, 1921.

In consequence of the above, all necessary precautions were taken and the following circular letter was sent to all physicians in the city.

SMALLPOX WARNING.

To the Medical Profession.

There have recently occurred in Boston a considerable number of exposures to infection by smallpox among persons who cannot now be traced by the Health Department, many of whom are ignorant of their exposure to smallpox and some of whom may apply to you for treatment. Inasmuch as early and prompt diagnosis of doubtful cases may be facilitated by a knowledge of the possibility of exposures to smallpox, this information is transmitted to you.

These exposures originated in the case of one John Handrahan, residing in the South End, and most of the exposures occurred in the South End and Roxbury, although not all of them. Mr. Handrahan states that he has not been out of Boston for some time, and it therefore must be presumed that he contracted the disease in this city, indicating the presence of an earlier focus of infection here.

The onset of Handrahan's case occurred on March 18, but the nature of the malady was not recognized until the 30th, when it was brought to the attention of the Health Department. No precautions were taken in the interval, the patient even attending church while in an eruptive stage. Secondary cases may therefore begin to develop about April 1 and continue to develop until the middle of April. From now on, therefore, there is a possibility that any person suffering from an acute malady not definitely diagnosed may be suffering from smallpox. This should be borne in mind.

The experience of the Health Department shows that smallpox in the pre-eruptive stage is likely to be mistaken for influenza or possibly for rheumatism, with the result that nothing is done for the protection of others until the eruption has

been out several days. During the eruptive stage confusion is most likely to occur with chickenpox and certain of the eruptions of syphilis.

Your co-operation in the present situation is requested. The Health Department will be glad to assist in the way of making diagnosis in any doubtful case. But when doubt arises isolation of the patient and vaccination of contacts should be put into effect at once without waiting for the Health Department or for a positive diagnosis.

DISEASE PREVENTION THROUGH PUBLICITY.

To teach and to persuade men, women and children to take care each of his own health and of the health of one another is better than to compel them by law to do so. But this idea has only recently come to the surface in the minds of men, standard methods to give it concrete form have hardly been developed, and in most health departments efficient machinery for carrying into effect even such methods as are recognized as desirable does not exist. Certainly no such machinery exists in the Boston Health Department at the present time. An effort is being made, however, to build up within the department a health education service which will carry to the public through every available channel our present knowledge concerning the prevention and avoidance of disease, and the promotion of health, and concerning local conditions bearing upon those matters.

As part of that program, during February and March, speakers were provided by the Health Department at eight public meetings, held under the joint auspices of the Health Department, the Department for the Extended Use of Public Schools, and the Service Unit, at several school centers and elsewhere. Two meetings were held in Dorchester, two in the West End, and one each in Roxbury, Charlestown, South Boston and the North End. Diphtheria and other communicable diseases were discussed, and available methods for the prevention and avoidance of such diseases. After each talk persons in the audience were invited to ask questions and readily availed themselves of the opportunity.

It is planned to extend such publicity work during the coming season. The Health Department will welcome opportunities to co-operate with any organized group in the conduct of such meetings and to organize meetings on its own account in so far as its resources will permit.

REPORTS BY THE BACTERIOLOGICAL LABORATORY ON SPECIMENS SUBMITTED FOR EXAMINATION.

To physicians who only infrequently have occasion to submit specimens to the Bacteriological Laboratory of the Boston Health Department for examination, and to physicians who have only recently entered upon the practice of medicine in Boston, the following statement of the time and manner in which they may expect to receive from the laboratory reports on such specimens as they leave with it may be of interest.

1. All specimens for bacteriological or serological examination by the Health Department left at a culture station before five o'clock, p. m., and all such specimens left with the Health Department, City Hall Annex, before eleven o'clock, p. m., are reported upon on the following day, except specimens of blood for Wasserman examination.

2. Diphtheria cultures, *if positive,* are reported upon *by telephone* not later than eleven o'clock a. m. on the day following their submission, and a written report follows on that day.

3. Diphtheria cultures, if negative, and all other specimens, are reported upon only by mail, the report always being mailed except in the case of specimens of blood submitted for Wasserman examination, on the day following submission of the specimen.

4. Specimens of blood submitted for Wasserman examination and received at the Health Department after nine o'clock, a. m., on Friday, or at any time on Saturday, Sunday, or Monday, are reported upon by mail on the Tuesday following submission of the specimen. Specimens received on Tuesday, Wednesday, or Thursday, are reported upon by mail on the day following the delivery of the specimen at the Health Department.

5. A physician who has submitted a specimen for examination may obtain a report by telephone by calling up the Health Department for that purpose; but no such call should be made earlier than twelve o'clock, noon, on the day following the submission of the specimen, except that on Sundays and holidays calls may be received and answered at any time after half past nine o'clock, a. m. Ordinarily the telephone call for this purpose is Fort Hill 5100, Branch 153. On Sundays and legal holidays, however, the proper telephone number is Fort Hill 5109, up to ten o'clock, a. m., and after that hour, Fort Hill 5100 or Main 3887.

ENCEPHALITIS LETHARGICA.

Encephalitis lethargica was made a reportable disease on March 1, 1921. During the month just ended, the first month under the reporting system, 18 cases were reported. There were 8 deaths. The reported cases included some that had occured earlier in the year that were entered on the records in March because of the initial operation of the compulsory reporting on the first of that month.

The total cases reported during January, February and March, 1921, were 54. The total number of deaths were 17. In 1920 there were 28 cases reported with 17 deaths.

SCHOOL VACCINATION VERSUS SCHOOL SMALLPOX.

Vaccinations of pupils in the public schools of Minneapolis, Minn., between November, 1920, and February, 1921, by school physicians numbered 18,382, and probably many additional pupils were vaccinated by their family physicians. Between the time when the first of these vaccinations was done, in November 1920, and the close of the period covered by the report, February 1921, the incidence of smallpox in the schools was reduced from 51 per cent of all cases in the city to 18 per cent. This reduction occurred notwithstanding the presence of an increasing number of cases of smallpox.

Vaccination or smallpox: The community may take its choice, but one or the other it must have.

FAMILY INVOLVEMENT IN SYPHILIS.

The families of 555 patients in the late stages of syphilis were examined by Dr. Harris E. Solomon and Maida H. Solomon of the Massachusetts Psychiatric Institute during a period of five years. At least one fifth of the families of these patients were found to have one or more syphilitic members in addition to the original patient. Between one fourth and one third of the houses examined showed syphilitic involvements, while between one in twelve and one in six of the children were found syphilitic. It was recommended that the family of every syphilitic patient be examined irrespective of the stage of the disease or the symptoms presented by the patient when first seen, so as to discover cases of conjugal and congenital syphilis, in order that treatment may be had before irreparable destructive lesions occur.

THE ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING MARCH, 1921.

Classification.	Number.	Percentage.
After death	8	12.31
7 days or less	3	4.62
8 to 14 days, inclusive	2	3.08
15 to 21 days, inclusive	4	6.15
22 to 31 days, inclusive	2	3.08
Within First Month	19	29.24
Within second month	3	4.62
Within third month	7	10.77
Within fourth month	2	3.08
Within fifth month	5	7.69
Within sixth month	1	1.54
Within seventh month	1	1.54
Within eighth month	3	4.62
Within ninth month	2	3.08
Within tenth month	1	1.54
Within eleventh month	3	4.62
Within twelfth month	—	—
Within First Year Preceeding Death	47	72.34
Within second year	8	12.31
Within third year	—	—
More than three years	10	15.38
Total	65	100.02

VITAL STATISTICS FOR MARCH, 1921.

The large decrease in the number of deaths occurring during March, 1921, as compared with the number during the corresponding month of 1920 is extremely interesting, especially in view of the wide range of diseases that contributed toward the decrease. The total number of deaths for the month of March, 1921, was 989, a decrease of 9.35 per cent as compared with 1,091 in March last year. Deaths of children under one year decreased from 189 to 160, and at the other extreme of life, sixty years and beyond, deaths decreased from 363 to 340. Apoplexy, heart diseases, chronic nephritis, broncho-pneumonia, and diarrheal diseases of children under two years of age were all less fatal this year than last, but deaths from accidents increased from 35 to 42 and deaths

from cancer increased from 70 to 79. From the communicable diseases diphtheria showed a marked increase in the number of cases from 161 to 310, while scarlet fever increased from 278 to 318 cases; and lobar pneumonia increased from 138 to 153, tuberculosis other than pulmonary, from 23 to 48, and typhoid fever from 7 to 10. The number of deaths from diphtheria were substantially stationary, 14 deaths having occurred in 1920 and 13 in 1921, but deaths from scarlet fever rose from 5 to 15. The number of reported cases of influenza fell from 326 last year to 31 in 1921, while cases of measles fell from 932 to 434; of pulmonary tuberculosis from 251 to 193 and of whooping cough from 352 to 126.

The tables printed on pages 50 and 51 are well worthy of careful study.

FRAUD IN BUTTER.

Water is the oldest and cheapest substance for adulterating food products. Presumably it has been employed more commonly than any other adulterant. It is now being used by creameries and others, upon a systematic basis, to extend butter. Every excess pound of water sold as butter means that consumers have been defrauded and that some butter manipulator or dealer has received an unwarranted profit. Sixty-five to seventy cents a pound for water is a high price to pay for this liquid. Standards have been adopted in many states establishing a minimum percentage of fat in butter. Until recently the requirement in this state was 82.5 per cent. This allowed for reasonable quantities of water, salt, and curd in butter, and gave the purchaser a fair percentage of what he assumed he was buying, namely, butter fat. This protection to the consumer, however, no longer exists, for by the recent revision of the laws of Massachusetts, the food law, under which the above fat standard was adopted, was so modified that it no longer applies to butter, and there is no fixed limit upon the amount of water that butter may lawfully contain.

There is no question that this impregnation of butter with large quantities of water has been carried out on an extensive scale; even the teaching of dairying methods of late years has included the imparting of information as to the course to pursue to increase the moisture content in butter. In large creameries each lot of butter during the process of

manufacture is examined to determine the exact amount of moisture it contains. Thus manufacturers know the extent to which they have succeeded in incorporating excess water and imposing upon consumers. Salt and curd in excessive quantities are also found in butter, but most frequently the consumer suffers through manipulation with water.

Before the legislative annulling of the butter standard, this department had entered in the courts complaints against certain dealers selling butter below the state standard, and these issues were pending in the Superior Court when the standard was abrogated. Other cases were in course of preparation at the time. All are now dead issues. Unfortunately this situation can only be remedied by new legislation, and at present the only safeguard as to the quality of butter rests with the character and guaranty of the dealer.

DESTRUCTION OF TRICHINAE BY X-RAYS.

Under the auspices of the United States Department of Agriculture experiments have recently been conducted to determine the availability of X-rays for the destruction of trichinae in pork. The experimenters concluded, however, that their work warranted no definite statement as to the practicability of the process.

[Journal of Agricultural Research, 20, 845–854, March 1, 1921.]

Amount of Sleep Necessary for Children.—According to a leaflet issued by the London County Council, medical authorities and others agree that school children need the following amounts of sleep daily: Under four years old, 12 hours; from five to seven years old, 11 to 12 hours; eight to eleven years old, 10 to 11 hours; twelve to fourteen years, 9 to 10 hours. As an inducement to get children to bed early, it might easily suggest that a tired mother may get a quiet hour or two if the children are in bed by 6:30 p. m.

[Public Health reports, October 15, 1920, page 2463.]

Value of Health.—Health constitutes the chief stock in trade of the man who must earn his living by his daily toil, the mechanic, the merchant, the manufacturer, or the professional man. If health sinks below a certain level, he becomes a dependent, and possibly drags his family down with him. His capacity for productive activity is in proportion to the goodness of his health, and to his capacity to enjoy the fruits of his labor.

SUMMARY OF THE WORK, MARCH, 1921.

BUREAU OF ADMINISTRATION.

	Mar.	Feb.
Conferences	3	2
Hearings	0	2
Prosecutions ordered	6	4
Orders	1	4
Special drafts	1	0
Bids accepted	1	1

	Mar.	Feb.
Personnel:		
Appointments	1	1
Removal of employees	1	0
Appointments made permanent	0	1
Salaries increased	0	0
Resignations	1	1
Leaves of absence granted	1	1

LICENSES, PERMITS, ETC., ISSUED.

	Mar.	Feb.
Burial permits	1,120	996
Disinterment permits	17	5
Undertakers licenses	2	0
Milk licenses	1,255	103
Pedlers' licenses, general	133	55
Hen licenses, granted	530	32
Grease, bones, etc., licenses	90	66
Dump licenses	10	10

	Mar.	Feb.
Sundry licenses, sausage	1	0
Stable permits granted	1	0
Stable permits revoked	0	0
Stable hearings	1	1
Denatured alcohol licenses	4	13
Manicure-Massage:		
Granted	23	19
Lying-in hospitals certified	2	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Mar.	Feb.
Visits by medical inspectors	2,218	1,921
Deaths investigated	15	23
Vaccinations	86	7

	Mar.	Feb.
Vaccination certificates	3	7
Cases brought to Boston for treatment	70	133
Antitoxin administered	13	28

NURSING SERVICE.

	Mar.	Feb.
Communicable disease visits	4,323	3,402
Babies visited, first visit	577	999
Revisits	1,537	1,354
Tuberculosis	0	12

HEALTH UNIT (Blossom Street).

	Mar.	Feb.
Health Department proper:		
Vaccinations	21	4
Vaccination certificates issued	10	3
Cases visited by nurses:		
Communicable diseases	217	185
Babies	104	148
Complaints made of insanitary conditions	11	6
Total	363	346

	Mar.	Feb.
Baby Hygiene Association:		
Babies cared for	419	407
Babies newly admitted	23	19
Babies readmitted	4	1

	Mar.	Feb.
Conferences:		
Number	10	6
Total attendance	163	289
Home visits by nurses	673	585

	Mar.	Feb.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	97	82
Consumptives' Hospital Department:		
Calls by nurses in districts	773	903
Instructive District Nursing Association:		
Visits by nurses	2,020	1,873
Nutrition Conference:		
Attendance by babies for examination	36	44
Attendance at class for undernourished children	70	60

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Mar.	Feb.
New reports	1,637	990
Stores inspected	2,755	1,722
Sanitary defects remedied	341	87
Complaints at office	34	20
Referred to Sanitary Division	65	44
Milk applications approved	195	109
Pedlers:		
Applications for licenses approved	134	55
Vehicles inspected and approved	544	390
Court cases	1	17
Fines	$50	$270

CONDEMNATIONS.

By Request.

Poultry	190 pounds	Condensed milk	48 cans
Shrimp	9 cans	Jam	6,000 cans
Herring	32 jars	Raisins	50 pounds
Anchovies	32 cans	Eggs	14½ dozen
Crab meat	38 pounds	Onions	3,300 pounds
Scallops	40 gallons	Cereal	4 packages
Peas	3 cans	Currants	1,195 pounds
Beans	104 pounds	Chocolates	231 pounds
Filberts	135 pounds	Pretzels	65 pounds
Salt	78 pounds	Apples	1 can
Miscellaneous canned goods	171 cans	Tomatoes	2 cans
		Ketchup	756 bottles

Not Requested.

Lamb	17 pounds	Apples	42 cans
Shoulder	77 pounds	Onions	½ bushel
Beef	450 pounds	Tomato paste	199 cans
Sausage	1,200 pounds	Walnuts	2,800 bags
Ham	20 pounds	Tomatoes	10 cans
Bacon	10 pounds	Oranges	1 box
Pork	53 pounds	Cheese	7 pounds
Poultry	13 pounds	Eggs	85 pounds
Pigs' Feet	25 pounds	Squash	3 cans
Flour	600 pounds	Corn	40,000 pounds
Cranberries	10 pounds	Chocolates	55,000 pounds
Cabbages	3 bushels	Halibut	7 pounds
Turnips	2 bushels	Flounders	23 pounds
Carrots	2 bushels	Cod fish	5 pounds
Potatoes	2 bushels	Crab meat	2,160 pounds
Apples	½ bushel	Soup	8 pounds

Samples submitted to Chemical Laboratory for analyses:

Sausages	6	Apples	1
Eggs	1	Bread	1
Soap	1	Candy	3
Cake coloring	2	Tonic	1

LIVE STOCK INSPECTION (Brighton Abattoir).

	Mar.	Feb.		Mar.	Feb.
Cattle inspected	15	14	Sheep inspected	1	2
Calves inspected	4,690	2,209	Parts condemned	136	97
Swine inspected	5,076	4,790	Animals condemned	20	5

DAIRY DIVISION.

	Mar.	Feb.		Mar.	Feb.
Dairies inspected	524	507	With milk rooms	331	264
Scoring above 50*	389	322	Without milk rooms	193	243
Scoring below 50	135	185	Inactive	4	23

* Passable mark.

BUREAU OF MILK INSPECTION.

	Mar.	Feb.		Mar.	Feb.
Chemical Inspection of:			Bacteriological examinations of:		
Milk	1,142	1,017	Milk	684	574
Ice cream	11	0	Ice cream	42	0
Butter and cheese	2	9	Court cases	35	0
Vinegar	173	165	Fines	$490	0
Miscellaneous	32	22			

SANITARY INSPECTION.

	Mar.	Feb.		Mar.	Feb.
Original inspections	2,226	781	Car reports	1,582	1,314
New reports	3,012	1,236	Complaints	971	596
Reinspections	631	3,980	Court cases	2	7
Legal notices served	423	214	Fines	$60	$40

HOUSING SERVICE.

	Mar.	Feb.		Mar.	Feb.
Interior rooms lighted and ventilated	17	8	Removed from cellars	5	0
Water-closets:			Privies abolished	0	2
Interior lighted and ventilated	47	27	Old buildings demolished	0	8
Newly installed	11	5	Old buildings removed	6	0
			Houses vacated	0	2

BACTERIOLOGICAL LABORATORY.

Examinations for diagnosis and release:

	Mar.	Feb.
Diphtheria	1,899	2,138
Tuberculosis	283	271
Typhoid	55	47
Gonorrhea	577	646
Gonorheal opthalmia	49	53
Syphilis	1,041	988
Other examinations	40†	17*
Bacteriological examinations of milk	616	574
Examination of rats	1,721	1,479

† Cat's head for rabies, 1; dog's head for rabies, 1; dark field examinations, 1; pleural fluid for pus, 1; Weil-Felix examinations, 5; spinal fluid for meningococci, 2; spinal fluid for tuberculosis, 1; cultures for virulence, 1; lobster for ptomaines, 1; canned corn for toxins, 1; ketchup for yeast and molds, 1; crab meat for toxins, 1; taffy apples for poison malaria, 10; genito-urinary examinations, 10.

* Malaria, 4; celery, for mold, 1; dark field illumination, 2; genito-urinary T. B. 1; culture for virulence, 6; blood for paratyphoids, 2; tomato paste for poison, 1.

VITAL STATISTICS, MARCH, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MARCH, 1921, WITH COMPARATIVE FIGURES FOR MARCH 1920.

	CASES AND DEATHS.					
	ACTUAL NUMBER.			RATE PER 1,000 POPULATION.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
ALL CAUSES:						
Total deaths	989	1,091	—102	15.66	17.42	—1.76
Nonresidents deducted	813	919	—106	12.87	14.67	—1.80
BY AGE:						
Under one year	160	189	—29	2.53	3.01	—.48
One year to four years, inclusive	46	66	—20	.72	1.05	—.33
Sixty years and over	340	363	—23	5.38	5.79	—.41
BY SPECIAL CAUSES:						
DEGENERATIVE DISEASES, SO CALLED:						
Apoplexy	49	70	—21	.77	1.11	—.34
Arterio-sclerosis	53	51	+2	.83	.81	+.02
Heart disease	134	141	—7	2.12	2.25	—.13
Nephritis, chronic	62	66	—4	.98	1.04	—.06
INFANT AND MATERNAL MORTALITY:						
a. Total registered live births	1,751	1,752	—1	27.73	27.98	—.25
b. Registered stillbirths	43	56	—13	.68	.89	—.21
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	*23.96	*31.96	—8.00
c. Deaths of mothers from causes incident to childbirth	13	21	—8	.20	.33	—.13
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	*7.24	*11.61	—4.37
d. Deaths of children in first year of life	160	189	—29	2.53	3.01	—.48
Deaths in first year per 1,000 live births	.....	.....	.....	†91.37	†107.87	—16.50
VIOLENCE:						
Accidents	42	35	+7	.66	.55	+.11
Homicides	2	2	.....	.03	.03	.....
Suicides	4	7	—3	.06	.11	—.05
MISCELLANEOUS:						
Alcoholism, acute or chronic	4	2	+2	.06	.03	+.03
Broncho-pneumonia	54	84	—30	.85	1.34	—.49
Cancer	79	70	+9	1.25	1.11	+.14
Cirrhosis of the liver	5	7	—2	.07	.11	—.04
Diabetes mellitus	9	10	—1	.14	.15	—.016
Diarrheal diseases, children under two years of age	7	24	—17	.11	.38	—.27

* Rate per 1,000 live births and stillbirths together. † Rate per 1,000 live births.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	3	1	+2	.05	.016	+.03
Deaths.						
Cerebro-spinal meningitis.....Cases..	5	6	—1	.07	.09	—.02
Deaths.	1	5	—4	.016	.07	—.05
Diphtheria.....Cases..	310	161	+149	4.91	2.57	+2.34
Deaths.	13	14	—1	.20	.22	—.02
Influenza.....Cases..	31	326	—295	.49	5.20	—4.71
Deaths.	4	26	—22	.06	.41	—.35
Measles.....Cases..	434	932	—498	6.87	14.88	—8.01
Deaths.	5	8	—3	.07	.12	—.05
Pneumonia (lobar).....Cases..	153	138	+15	2.42	2.20	+.22
Deaths.	64	78	—14	1.01	1.24	—.23
Scarlet fever.....Cases..	318	278	+40	5.03	4.44	+.59
Deaths.	15	5	+10	.23	.07	+.16
Tuberculosis (pulmonary).....Cases..	193	251	—58	3.05	4.01	—.96
Deaths.	72	86	—14	1.14	1.37	—.23
Tuberculosis (other forms).....Cases..	48	23	+25	.76	.36	+.40
Deaths.	12	11	+1	.19	.17	+.02
Typhoid fever.....Cases..	10	7	+3	.15	.11	+.04
Deaths.	3	1	+2	.05	.016	+.03
Whooping cough.....Cases..	126	352	—226	1.99	5.62	—3.63
Deaths.	7	18	—11	.11	.28	—.17

DEATHS AND DEATH RATES FOR CERTAIN MASSACHUSETTS CITIES, MARCH, 1921.*

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.				Death Rates During Week Ending.			
		March 26.	March 19.	March 12.	March 5.	March 26.	March 19.	March 12.	March 5.
Boston	757,634	211	233	229	217	14.5	16.0	15.8	14.9
Bridgeport	149,967	26	25	41	32	9.0	8.7	14.3	11.1
Cambridge	110,444	25	29	29	29	11.8	13.7	13.7	13.7
Fall River	120,668	[1]40	[1]42	[1]61	[1]42	[1]17.3	[1]18.1	[1]26.4	[1]18.1
Lowell	113,757	46	34	32	36	21.1	15.6	14.7	16.5
New Bedford	125,012	34	30	30	37	14.2	12.5	12.5	15.4
Providence	239,645	79	78	59	67	17.2	17.0	12.8	14.6
Springfield	135,877	41	43	41	33	15.7	16.5	15.7	12.7
Worcester	184,972	65	68	53	40	18.3	19.2	14.9	11.8

* Published by the Weekly Health Index of the Bureau of the United States Census.

[1] Reports for weeks ending March 4, 11, 18, 25.

Fake Cures for Tuberculosis Costly.—Fake cures for tuberculosis defraud the public of from $15,000,000 to $25,000,000 a year, according to figures compiled by the National Tuberculosis Association.

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100—Main 3887.*)

Commissioner of Health	1109 City Hall Annex.
Secretary	1108 City Hall Annex.
Medical Division	1110–11 City Hall Annex.
Health Unit	17 Blossom street.
Detention Hospital	Southampton street.
Bacteriological Laboratory	1101 City Hall Annex.
Food Inspection Division	1001A City Hall Annex.
Inspection of Foodstuffs	1001A City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1001G City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Public Health Education	1108 City Hall Annex.
Sanitary Inspection Division	1001C City Hall Annex.
Abatement of Nuisances	1001B City Hall Annex.
Housing Service	1001C City Hall Annex.
Examination of Gas Fitters	1001C City Hall Annex.
Vital Statistics Records and Accounts Division	1112 City Hall Annex.
Permits for Burial	110 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

* This number available for burial permits and for other business after regular business hours.

Office Hours.—General offices on the eleventh floor of the City Hall Annex, 9 a. m. to 5 p. m., excepting on Saturday afternoons, Sundays and holidays, for the transaction of business not specified below.

Room 110, City Hall Annex, first floor, open from 9 a. m. to 10 p. m., and Sundays and holidays from 10 a. m. to 10 p. m., for the reporting of cases of communicable diseases, the issuing of burial permits, the receiving of cultures and widals, and the receiving of complaints.

The distribution of vaccines and antitoxins will be from the laboratory between the hours of 9 a. m. and 6 p. m., excepting Saturday afternoons, Sundays and holidays.

Wassermann Tests, Etc.—The bacteriological laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

Dark Field Illumination.—The bacteriological laboratory is prepared to examine free of expense at the request of physicians lesions suspected of being syphilitic, by dark field illumination. Tests are made every afternoon between 2 and 4 p. m., except Saturdays, Sundays and holidays.

STATISTICS FOR 1920.

Population 751,251

Live Births	19,494	Birth rate (live births)	25.94
Deaths	11,601	Death rate	15.44

The deaths and death rate stated above cover all deaths occurring in Boston, of nonresidents as well as of residents.

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

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VOL. 10. BOSTON, APRIL-OCTOBER, 1921. NO. 4

AN EXPLANATION — AND A PROMISE.

There are gathered in the following pages statistics relative to the public health and the activities of the Health Department during the months of April, May, June, July, August, September, October, 1921. Ordinarily these statistics would have been published in bulletins issued month by month, together with explanatory text and other reading matter of more or less interest; and it has been the desire, and it is the intention, of the Health Department to continue publication in that way of such bulletins as it hereafter issues.

Such statistics as are necessary for the publication of the usual monthly issues of the bulletin are always available with reasonable promptness after the close of each month. Reading matter, too, is available that can be used if it be desired merely to get the bulletin out "on time," regardless of the value of its contents. Possibly it would have been well during the period of delay covered by this issue to have followed such a course.

In the desire, however, to maintain and even to raise the quality of the bulletin, publication has been delayed from time to time in the hope that facilities might be found whereby the text might be of substantial value, but that hope has not yet been realized, and there appears to be no reason for believing that it will be in the near future; and as the statistics for each month have receded further and further into the past the service to be rendered the community by supplementing figures by reading matter has become less and less. The publication of the statistics, however, still seems worth while, notwithstanding their staleness, to facilitate the comparison of such

Boston data with corresponding data relating to other cities and with corresponding data relating to Boston itself during other years.

The considerations set forth above have lead to the present cumulative issue of the Monthly Bulletin, which brings it up to date. It is submitted with apologies for the delay in its appearance. Hereafter, even though nothing more than the substance of the statistics customarily published be available, copy will be sent to the printer on or before the fifth working day of each month, and the bulletin will be issued as soon thereafter as the resources of the Printing Department will permit, which should be not later than the 15th of each month.

MORTALITY IN BOSTON, JANUARY TO OCTOBER, INCLUSIVE, 1921 AND 1920.

A remarkable fall in the number of deaths that occurred in Boston during the first ten months of the current year as compared with the corresponding period of last year is shown by the records of the Health Department. Last year 9,875 deaths were recorded; this year, 8,370. The diminished prevalence of influenza during the current year accounts for only one-third of the improvement in the record, deaths from influenza having been 474 in 1920 as against 19 in 1921, a difference of but 455. The diseases whose death records are more or less closely correlated with the death record of influenza account for a fair part of the improvement, deaths from bronchopneumonia having diminished from 601 to 358, and lobar pneumonia from 568 to 378. But after all of the deaths from influenza, bronchopneumonia and lobar pneumonia have been considered, there were still 617 fewer deaths during the first ten months of 1921 than there were during the corresponding ten months of last year.

Deaths from all causes among children under one year of age fell from 1,694 to 1,255. In the age group at the other extreme of life, over sixty years of age, there was a decline from 3,153 to 2,926. Deaths from diarrhœa and inflammation of the bowels among children under two years of age fell from 327 to 187.

The unaccountable decline in the prevalence of tuberculosis in all forms that has been noted during several years past has continued, deaths from pulmonary tuberculosis having fallen from 722 to 641, and deaths from all other forms of tuberculosis having fallen from 111 to 95. Deaths from whooping cough fell from 148 to 31; measles from 62 to 33; cerebro spinal meningitis from 25 to 20; infantile paralysis from 46 to 11.

In the group of certain diseases sometimes spoken of as degenerative diseases, relating more or less to matters of nutrition, a distinct improvement was apparent. Deaths from hardening of the arteries fell from 530 to 405; cerebral hemorrhage, from 542 to 490; inflammations of the kidneys, from 504 to 449; heart disease, from 1,225 to 1,160; diabetes mellitus from 150 to 132.

The fatalities from certain causes, of course, showed increases. Deaths from cancer rose from 799 to 867; appendicitis, from 107 to 126; diphtheria, from 109 to 122; encephalitis lethargica ("sleeping sickness"), from 15 to 25; typhoid fever, from 9 to 22.

There was an increase in the number of deaths from alcoholic poisoning, from 19 to 42. Deaths, however, from accidents fell from 418 to 405; homicides, from 34 to 20; suicides, from 82 to 72.

The most regrettable feature apparent in the record is the increase in the number of deaths from diphtheria, 109 to 122. The disease is a preventable one, and one ordinarily easily cured if treatment be promptly instituted. The increase, therefore, is not creditable to the community.

The increase in the number of deaths from cancer is deplorable, of course, but until we have a wider medical and surgical knowledge of cancer, and particularly until the laity understands the importance of early attention to symptoms of cancer, we can hardly look for a decline in deaths from this cause. The increase in the number of deaths from encephalitis lethargica ("sleeping sickness") is interesting and somewhat disturbing, but it can hardly be clearly stated yet as to whether the increase is due to an actual increase in the number of cases of this disease or due to the fact that with the recognition of encephalitis lethargica as a distinct disease cases are being brought within the group that otherwise would have been charged to other causes.

SUMMARY OF THE WORK, APRIL, 1921.

BUREAU OF ADMINISTRATION.

	Apr.	Mar.
Conferences	2	5
Hearings	2	2
Prosecutions ordered	64	5
Orders	4	3
Special Drafts	1	2

	Apr.	Mar.
Personnel:		
Appointments	7	3
Promotions	1	0
Removal	0	1
Appointments made permanent	2	1
Salaries increased	75	0

LICENSES, PERMITS, ETC., ISSUED.

	Apr.	Mar.
Burial permits	1,022	1,120
Disinterment permits	52	17
Undertakers licensed	138	2
Milk licenses	1,271	1,255
Pedlers' licenses:		
General	232	81
Limited	193	133
Hen licenses granted	137	521
Grease, bones, etc., licenses	78	0

	Apr.	Mar.
Dump licenses	8	0
Manure licenses	3	0
Stable permits granted	2	0
Denatured alcohol licenses	56	0
Sundry licenses	25	0
Lying-in hospitals approved	0	2
Manicure-massage:		
Granted	34	21
Lodging houses certified	8	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Apr.	Mar.
Visits by medical inspectors	3,429	2,218
Deaths investigated	15	15
Vaccinations	89	86

	Apr.	Mar.
Vaccination certificates	20	3
Cases brought to Boston for treatment	94	70
Antitoxin administered	8	13

NURSING SERVICE.

	Apr.	Mar.
Communicable diseases, visits	5,744	4,323
Babies visited, first visits	200	577
Revisits	1,723	1,537
Total visits by nurses	7,667	6,437

HEALTH UNIT (Blossom Street).

Health Department proper:	Apr.	Mar.
Vaccinations	26	21
Vaccination certificates issued	16	10
Cases visited by nurses:		
Communicable diseases	234	217
Babies	75	104
Complaints received of insanitary conditions	16	11
Totals	367	363

	Apr.	Mar.
Baby Hygiene Association:		
Babies cared for	405	419
Babies newly admitted	21	23
Babies readmitted	3	4

	Apr.	Mar.
Conferences:		
Number	7	10
Total attendance	288	363
Home visits by nurses	621	673

	Apr.	Mar.
Boston Dispensary:		
Calls by district physicians from Boston Dispensary	91	97
Consumptives' Hospital Department:		
Calls by nurses in district	904	773
Instructive District Nursing Association:		
Visits made by nurses	2,031	2,020
Nutrition Clinic:		
Number of children examined	20	36
Undernourished children	38	70
Total attendance	58	106

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Apr.	Mar.
New reports	577	1,637
Sanitary defects remedied	194	341
Referred to Sanitary Division	38	65
Complaints at office	21	34
Milk applications approved	134	195
Stores inspected	1,845	2,755
Pedlers:		
Applications for licenses approved	167	134
Vehicles inspected and approved	492	544
Court cases	9	1
Fines	$95	$50

ARTICLES CONDEMNED.

Without Request.	
Walnuts	75 pounds
Candy	9,589 pounds
Strawberries	16 quarts
Chestnuts	3,476 pounds
Butter	22 pounds
Apples	30,240 pounds
Pork	96 pounds
Liver	3 pounds
Beef	105 pounds
Frankfurts	9 pounds
Lamb	50 pounds
Haddock	53 pounds
Cod	76 pounds
Halibut	12 pounds
Herring	15 pounds
Oysters	1 gallon
Scup	8 pounds
Flounders	5 pounds
Crab meat	240 cases
Shad	6¼ pounds

Requested.	
Peanut butter	1 case
Crackers	1 box
Canned goods	16 cans
Ice cream cones	2 cases
Nuts	1 bag
Cooking oil	1 can
Eggs	2 dozen
Tomatoes	9 cans
Tomato paste	6 cans
Strawberries	34 cans
Peas	5 cans
Pineapple	55 cans
Hominy	3 cans
Yellow meal	1 bag
Peas	1 bag
Barley	1 bag
Corn cakes	1 carton
Flour	94 pounds
Sardines	2 cans
Samples submitted for analysis to Chemical Laboratory:	
Bread	1
Sugar	1

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Apr.	Mar.		Apr.	Mar.
Cattle inspected	36	15	Sheep inspected	0	1
Calves inspected	4,475	4,690	Parts condemned	56	20
Swine inspected	4,404	5,076	Animals condemned	1,371	136

DAIRY DIVISION.

	Apr.	Mar.		Apr.	Mar.
Dairies inspected	408	524	With milk rooms	259	331
Scoring above 50*	304	389	Without milk rooms	149	193
Scoring below 50	105	135	Inactive	50	4

BUREAU OF MILK INSPECTION.

	Apr.	Mar.		Apr.	Mar.
Chemical examinations:			Bacteriological examinations:		
Of milk	1,390	1,166	Of milk	667	684
Of butter and cheese	0	2	Of ice cream	58	42
Of ice cream	1	11	Court cases	28	35
Of vinegar	7	173	Fines	$535	$490
Miscellaneous	6	32			

SANITARY DIVISION.

	Apr.	Mar.		Apr.	Mar.
Original inspections	1,660	2,226	Car reports	1,300	1,582
New reports	2,138	3,012	Complaints	806	971
Reinspections	5,576	631	Court cases	48	2
Legal notices served	598	423	Fines	$180	$60

HOUSING SERVICE.

	Apr.	Mar.		Apr.	Mar.
Interior rooms lighted and ventilated	14	17	Yards paved and drained	2	2
Water-closets:			Sinks removed from halls to kitchens	6	0
Interior lighted and ventilated	47	47	Privies abolished on water-front	2	2
Number installed	11	11	Basements vacated	4	4
Removed from cellars	0	4	Old buildings removed	0	6
Old buildings demolished	4	0			

BACTERIOLOGICAL LABORATORY.

Examinations for diagnosis and release:	Apr.	Mar.
Diphtheria	1,788	1,899
Tuberculosis	348	283
Typhoid	68	55
Gonorrhea	562	577
Gonorrheal ophthalmia	79	49
Syphilis	1,109	1,041

* Passable mark.

Other examinations	*32	†40
Bacteriological examinations of milk	679	616
Bacteriological examinations of ice cream	58	42
Examination of rats	2,045	1,721

* Cultures for virulence, 6; blood for paratyphoids, 2; spinal fluid for meningococci, 1; malaria, 11; genito-urinary tuberculosis, 5; smear for dark fluid illumination, 2; smear for leprosy, 1; urine for typhoid, 1; feces for typhoid, 1; Weil Felix examination, 2.

† Cat's brain for rabies, 1; dog's head for rabies, 1; dark field examinations, 2; pleural fluid for pus, 1; Weil Felix examinations, 5; spinal fluid for meningococci, 2; spinal fluid for T. B., 1; cultures for virulence, 1; lobster for ptomaine, 1; canned corn for toxins, 1; ketchup for yeast and molds, 1; crab meat for toxins, 1; taffy apples for poison, 2; malaria, 10; genito-urinary examinations, 10.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING APRIL, 1921.

Classification.	Number.	Percentage.
After death	7	10.94
7 days or less	2	3.12
8 to 14 days, inclusive	1	1.56
15 to 21 days, inclusive	1	1.56
22 to 31 days, inclusive	3	4.69
Within First Month	14	21.87
Within second month	2	3.12
Within third month	6	9.38
Within fourth month	4	6.25
Within fifth month	3	4.69
Within sixth month	1	1.56
Within seventh month	3	4.69
Within eighth month	2	3.12
Within ninth month	—	—
Within tenth month	2	3.12
Within eleventh month	2	3.12
Within twelfth month	3	4.69
Within First Year Preceding Death	42	65.61
Within second year	8	12.50
Within third year	4	6.25
More than three years	10	15.63
Totals	64	99.99

VITAL STATISTICS, APRIL, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING APRIL, 1921, WITH COMPARATIVE FIGURES FOR APRIL, 1920.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	922	1,001	—79	14.60	15.98	—1.38
Nonresidents deducted	749	853	—104	11.86	13.62	—1.76
By Age:						
Under one year	134	172	—38	2.12	2.74	—.62
One year to four years, inclusive	66	68	—2	1.04	1.08	—.04
Sixty years and over	304	338	—34	4.81	5.39	—.58
By Special Causes:						
Degenerative Diseases, so Called:						
Apoplexy	60	57	+3	.95	.91	+.04
Arterio-sclerosis	40	29	+11	.63	.46	+.17
Heart disease	119	131	—12	1.88	2.09	—.21
Nephritis, chronic	53	62	—9	.84	.99	—.15
Infant and Maternal Mortality:						
a. Total registered live births	1,688	1,529	+159	26.73	24.42	+2.31
b. Registered stillbirths	52	45	+7	.82	.71	+.11
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	29.88	28.58	+1.30
c. Deaths of mothers from causes incident to childbirth	19	10	+9	.30	.15	+.15
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	10.94	6.35	+4.59
d. Deaths of children in first year of life	134	172	—38	2.12	2.74	—.62
Deaths in first year per 1,000 live births,	.....	.....	.....	79.38	112.49	—33.11
Violence:						
Accidents	30	49	—19	.47	.78	—.31
Homicides	3	2	+1	.04	.03	+.01
Suicides	7	7	.....	.11	.11	.....
Miscellaneous:						
Alcoholism, acute or chronic	3	3	.....	.04	.04	.....
Broncho-pneumonia	53	67	—14	.83	1.07	—.24
Cancer	99	90	+9	1.56	1.43	+.13
Cirrhosis of the liver	4	1	+3	.06	.16	+.04
Diabetes mellitus	8	23	—15	.12	.36	—.24
Diarrhœal diseases, children under two years of age	13	16	—3	.20	.25	—.05

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	.....	.....	.....	.....	.....	.....
Deaths.	2	.....	+2	.03	.....	+.03
Cerebrospinal meningitis.....Cases..	6	1	+5	.09	.01	+.08
Deaths.	2	1	+1	.03	.01	—.01
Diphtheria.....Cases..	246	126	+120	3.89	2.01	+1.88
Deaths.	11	10	+1	.17	.15	+.02
Influenza.....Cases..	23	57	—34	.31	.91	—.55
Deaths.	2	6	—4	.03	.09	—.06
Measles.....Cases..	559	1,004	—445	8.85	16.03	—7.18
Deaths.	3	11	—8	.04	.17	—.13
Pneumonia (lobar).....Cases..	149	91	+58	2.35	1.45	+.90
Deaths.	55	49	+6	.87	.78	+.09
Scarlet fever.....Cases..	116	277	—151	1.83	4.42	—2.59
Deaths.	10	9	+1	.15	.14	+.01
Tuberculosis (pulmonary).....Cases..	189	230	—41	2.99	3.67	—.68
Deaths.	79	77	+2	1.25	1.22	+.03
Tuberculosis (other forms).....Cases..	29	31	—2	.45	.49	—.04
Deaths.	8	14	—6	.12	.22	—.10
Typhoid fever.....Cases..	12	4	+8	.19	.06	+.13
Deaths.	1	1	.....	.01	.01	.....
Whooping cough.....Cases..	95	307	—212	1.50	4.90	—3.40
Deaths.	4	14	—10	.06	.22	—.16

DEATHS AND DEATH RATES FOR CERTAIN CITIES, APRIL, 1921.*

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.					Death Rates During Week Ending.[2]				
		April 2.	April 9.	April 16.	April 23.	April 30.	April 2.	April 9.	April 16.	April 23.	April 30.
Boston	757,634	228	227	214	215	203	15.7	15.5	14.7	14.8	14.0
Bridgeport	149,967	26	38	36	30	29	9.0	13.2	12.5	10.4	10.1
Cambridge	110,444	31	21	23	31	35	14.6	9.9	10.9	14.6	16.5
Fall River	120,668	[1] 28	[1] 35	[1] 39	[1] 35	[1] 27	[1] 12.1	[1] 15.1	[1] 16.9	[1] 15.1	[1] 11.7
Lowell	113,757	33	31	25	32	20	15.1	14.2	11.5	14.7	9.2
New Bedford	125,012	28	30	35	29	22	11.7	12.5	14.6	12.1	9.2
Providence, R.I.	239,645	66	62	82	54	63	14.4	13.5	17.8	11.8	13.7
Springfield	135,877	30	34	29	31	26	11.5	13.0	11.1	11.9	10.0
Worcester	184,972	51	68	41	44	42	14.4	19.2	11.6	12.4	11.8

[1] Reports for weeks ending Friday, April 1, 8, 15, 22, 29, 1921.
[2] These rates represent annual rates per 1,000 population.
* Published by the "Weekly Health Index" of the Bureau of the United States census.

SUMMARY OF THE WORK, MAY, 1921.

BUREAU OF ADMINISTRATION.

	May.	Apr.
Conferences	5	2
Hearings	4	2
Prosecutions ordered	21	62
Orders	4	4
Special drafts	1	1

	May.	Apr.
Personnel:		
Appointments	4	7
Promotions	0	1
Appointments made permanent	1	2
Salaries increased	0	75

LICENSES, PERMITS, ETC., ISSUED.

	May.	Apr.
Burial permits	978	1,022
Disinterment permits	47	52
Undertakers licensed	10	0
Milk licenses	1,406	1,211
Pedlers' licenses:		
General	233	213
Limited	195	193
Hen licenses:		
Granted	220	1,117
Refused	2	2
Grease, bones, etc., licenses	9	73
Rendering licenses	0	1

	May.	Apr.
Dump licenses	2	8
Manure licenses	0	3
Stable permits granted	2	2
Denatured alcohol licenses	50	56
Sundry licenses	1	26
Lying-in hospitals approved	1	0
Poultry slaughtering establishments granted,	1	0
Manicure-massage:		
Granted	585	22

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	May.	Apr.
Visits by medical inspectors	2,246	3,429
Deaths investigated	14	15
Vaccinations	877	89

	May.	Apr.
Vaccination certificates	156	20
Cases brought to Boston for treatment	76	94
Antitoxin administered	12	8

NURSING SERVICE.

	May.	Apr.
Communicable diseases, visits	4,046	5,744
Babies visited:		
First visits	579	200
Revisits	1,908	1,723
Total visits by nurses	6,533	7,667

HEALTH UNIT (Blossom Street).

Health Department proper :	May.	Apr.
Vaccinations	875	26
Vaccination certificates issued	155	16
Cases visited by nurses:		
Communicable diseases	190	234
Babies	54	75
Complaints received of insanitary conditions	16	16
Totals	260	325

	May.	Apr.
Baby Hygiene Association:		
Babies cared for	421	403
Babies newly admitted	30	21
Babies readmitted	0	3

	May.	Apr.
Conferences:		
Number	8	7
Total attendance	374	288
Home visits by nurses	575	621

	May.	Apr.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	51	91
Consumptives' Hospital Department:		
Calls by nurses in district	952	904
Instructive District Nursing Association:		
Visits made by nurses	2,080	2,031

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	May.	Apr.
New reports	585	577
Sanitary defects remedied	254	194
Referred to Sanitary Division	62	38
Complaints at office	164	21
Milk applications approved	37	134
Stores inspected	2,230	1,845
Pedlers:		
Applications for licenses approved	198	167
Vehicles inspected and approved	501	492
Court cases	21	9
Fines	$295	$95

CONDEMNATIONS.

By Request.	
Tomato paste	25 pounds.
Spinach	2 cans.
Sauce	9 cans.
Tomatoes	170 cans.
Horse radish	117 pounds.
Pork	225 pounds.
Olives	65 gallons.
Rolled oats	1,440 pounds.
Figs	570 pounds.
Candy	821 pounds.
Prunes	25 pounds
Corn meal	18 packages.
Crackers	285 pounds.

Without Request.	
Lamb	20 pounds.
Poultry	39 pounds.
Liver	12 pounds.
Beef	171 pounds.
Sausage	5 pounds.
Veal	70 pounds.
Shoulder	6 pounds.
Sweetbreads	7 pounds.
Fish	110,000 pounds.

Without Request.—*Continued.*	
Cocoanut shrimps	175 pounds.
Brittle	90 pounds.
Jellies	1,396 pounds.
Candy	175 pounds.
Peanuts	825 pounds.
Gelatine	25 pounds.
Potato chips	77 pounds.
Strawberries	3 crates.
Candy	¼ pound.
Sugar corn	3 cans.
Eggs	72 dozen.
Beans	100 pounds.
Butter	60 pounds.
Salt	1 bag.
Corn	565 packages.
Condensed milk	1 barrel.
Powder	100 pounds.
Citric acid	150 pounds.
Cream tartar	5 pounds.
Cocoanut oil	165 pounds.
Extracts	60 pounds.
Paste color	30 pounds.
Chocolate	200 pounds.
Cocoa	15 pounds.

Samples submitted for examination to Bacteriological Laboratory:	
Pork	3
Dextri Maltose	1
Ketchup	1
Total	5

Chemical Laboratory:	
Beverages	2
Jam	1
Dextri Maltose	2
Preserving salt	1
Candy	1
Total	7

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	May.	Apr.
Cattle inspected	89	36
Calves inspected	1,828	4,475
Swine inspected	4,311	4,404

	May.	Apr.
Parts condemned	7	56
Animals condemned	186	1,371

DAIRY DIVISION.

	May.	Apr.
Dairies inspected	624	408
Scoring above 50*	405	304
Scoring below 50	219	104

	May.	Apr.
With milk rooms	350	259
Without milk rooms	274	149
Inactive	9	50

BUREAU OF MILK INSPECTION.*

	May.	Apr.
Chemical examinations:		
Of milk	1,364	1,390
Of ice cream	2	1
Of vinegar	28	7
Miscellaneous	8	6

	May.	Apr.
Bacteriological examinations:		
Of milk	856	667
Of ice cream	122	58
Court cases	18	28
Fines	$380	$535

SANITARY DIVISION.

	May.	Apr.
Original inspections	1,391	1,660
New reports	2,183	2,138
Reinspections	5,656	5,576
Legal notices served	599	598

	May.	Apr.
Car reports	1,253	1,300
Complaints	908	806
Court cases	20	48
Fines	$122	$100

HOUSING SERVICE.

	May.	Apr.
Interior rooms lighted and ventilated	25	14
Water-closets:		
Interior lighted and ventilated	51	47
Number installed	14	11
Removed from cellars	4	0
Old buildings demolished,	0	4

	May.	Apr.
Halls lighted and ventilated	2	0
Yards paved and drained,	5	2
Sinks removed from halls to kitchens	16	5
Privies abolished on water fronts	1	2
Basements vacated	2	4
Old buildings removed	5	0

* Passable mark.

BACTERIOLOGICAL LABORATORY.

	May.	Apr.
Examinations for diagnosis and release:		
Diphtheria	1,803	1,788
Tuberculosis	305	348
Typhoid	77	68
Gonorrhea	648	562
Gonorrheal ophthalmia	54	79
Syphilis	1,005	1,109
Other examinations	* 42	† 32
Bacteriological examinations:		
Of milk	889	679
Of ice cream	143	58
Examination of rats	890	2,045

† Para typhoids, 2; spinal fluid for meningococci, 1; smear for dark field illumination, 2; malaria 11; genito urinary tuberculosis, 5; cultures for virulence, 6; smear for leprosy, 1; urine for typhoid, 1; feces for typhoid, 1; Weil Felix examination, 2.

* Dextro maltose for organisms, 4; para typhoids, 22; ketchup for yeast and molds, 1; spinal fluid for T. B., 1; malaria, 4; genito-urinary tuberculosis, 10.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING MAY, 1921.

Classification.	Number.	Percentage.
After death	4	7.14
7 days or less	1	1.79
8 to 14 days, inclusive	5	8.93
15 to 21 days, inclusive	—	—
22 to 31 days, inclusive	4	7.14
Within First Month	14	25.00
Within second month	1	1.79
Within third month	3	5.36
Within fourth month	3	5.36
Within fifth month	2	3.57
Within sixth month	—	—
Within seventh month	1	1.79
Within eighth month	1	1.79
Within ninth month	3	5.36
Within tenth month	1	1.79
Within eleventh month	3	5.36
Within twelfth month	—	—
Within First Year Preceding Death	32	57.17
Within second year	9	16.07
Within third year	7	12.50
More than three years	8	10.71
Totals	56	96.45

VITAL STATISTICS, MAY, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MAY, 1921, WITH COMPARATIVE FIGURES FOR MAY, 1920.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	856	926	—70	13.55	14.79	—1.24
Nonresidents deducted	695	787	—92	11.01	12.57	—1.56
By Age:						
Under one year	133	155	—22	2.11	2.47	—.36
One year to four years, inclusive	56	64	—8	.88	1.02	—.14
Sixty years and over	280	277	+3	4.43	4.42	—.01
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	53	54	—1	.83	.86	—.03
Arterio-sclerosis	42	23	+19	.66	.36	+.30
Heart disease	117	127	—10	1.85	2.02	—.17
Nephritis, chronic	40	47	—7	.63	.75	—.12
Infant and Maternal Mortality:						
a. Total registered live births	1,603	1,598	+5	25.38	25.52	—.14
b. Registered stillbirths	52	60	—8	.82	.95	—.13
Stillbirths per 1,000 births and stillbirths.	.....	.....	.....	32.43	36.18	—3.75
c. Deaths of mothers from causes incident to childbirth	17	21	—4	.26	.33	—.07
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	10.27	12.66	—2.39
d. Deaths of children in first year of life	133	155	—22	2.11	2.47	—.36
Deaths in first year per 1,000 live births	.....	.....	.....	82.96	96.99	—14.03
Violence:						
Accidents	39	43	—4	.62	.68	—.06
Homicides	2	6	—4	.03	.09	—.06
Suicides	3	4	—1	.04	.06	—.02
Miscellaneous:						
Alcoholism, acute or chronic	6	1	+5	.09	.01	+.08
Broncho-pneumonia	38	42	+4	.60	.67	—.07
Cancer	84	60	+16	1.33	1.08	+.25
Cirrhosis of the liver	7	4	+3	.11	.06	+.05
Diabetes mellitus	14	17	—3	.22	.27	—.05
Diarrhoeal diseases, children under two years of age.	13	20	—7	.20	.31	—.11

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	.....	+1	.01	.....	.....
Deaths.	.....	.....	.....	.....	.....	.....
Cerebro-spinal meningitis.....Cases..	7	2	+5	.11	.03	+.08
Deaths.	2	2	.....	.02	.03	.....
Diphtheria.....Cases..	286	125	+161	4.52	1.99	+2.53
Deaths.	19	10	+9	.30	.15	+.15
Influenza.....Cases..	8	19	—11	.12	.30	—.18
Deaths.	3	2	+1	.04	.03	+.01
Measles.....Cases..	436	1,015	—579	6.90	16.21	—9.31
Deaths.	3	14	—11	.04	.22	—.18
Pneumonia (lobar).....Cases..	103	126	—23	1.63	2.01	—.38
Deaths.	38	49	—11	.60	.78	—.18
Scarlet fever.....Cases..	185	247	—62	2.93	3.94	—1.01
Deaths.	5	7	—2	.08	.11	—.03
Tuberculosis (pulmonary).....Cases..	205	226	—21	3.24	3.60	—.36
Deaths.	64	84	—20	1.01	1.34	—.33
Tuberculosis (other forms).....Cases..	35	31	+4	.55	.49	+.06
Deaths.	12	12	.....	.19	.19	.....
Typhoid fever.....Cases..	12	9	+3	.19	.15	+.04
Deaths.	3	.....	+3	.04	.....	+.04
Whooping cough.....Cases..	69	322	—253	1.09	5.14	—.08
Deaths.	3	23	—20	.04	.36	—.32

DEATHS AND DEATH RATES FOR CERTAIN CITIES, MAY, 1921.*

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.				Death Rates During Week Ending.			
		May 28.	May 21.	May 14.	May 7.	May 28.	May 21.	May 14.	May 7.
Boston	757,634	213	193	185	209	14.7	13.3	12.7	14.4
Bridgeport	149,967	37	23	27	28	12.9	8.0	9.4	9.7
Cambridge	110,444	39	28	30	26	18.4	13.2	14.2	12.3
Fall River	120,668	[1] 52	[1] 33	[1] 45	[1] 32	[1] 22.5	[1] 14.3	[1] 19.4	[1] 13.8
Lowell	113,757	21	30	25	29	9.6	13.8	11.5	13.3
New Bedford	125,012	27	20	22	24	11.3	8.3	9.2	10.0
Providence	239,645	73	60	49	51	15.9	13.1	10.7	10.0
Springfield	135,877	33	28	31	34	12.7	10.7	11.9	13.0
Worcester	184,972	49	44	40	50	13.8	12.4	11.3	14.1

[1] Figures for deaths week ending May 6, 13, 20, 27.
* Figures from Weekly Health Index, published by the United States Bureau of Health.

SUMMARY OF THE WORK, JUNE, 1921.

BUREAU OF ADMINISTRATION.

	June.	May.
Conferences	3	5
Hearings	4	4
Prosecutions ordered	50	21
Orders	3	4
Special Drafts	0	1

	June.	May.
Personnel:		
Appointments	4	4
Promotions	1	0
Appointments made permanent	0	1
Undertakers, 75 reappointed.	1	10

LICENSES, PERMITS, ETC., ISSUED.

	June.	May.
Burial permits	887	978
Disinterment permits	16	47
Undertakers licensed	1	10
Milk licenses	780	1,406
Pedlers licensed	235	195
Hen licenses:		
Granted	166	220
Refused	2	0
Grease, bones, etc., licenses	0	9
Dump licenses	5	2
Manure licenses	1	0

	June.	May.
Stable permits granted,	0	2
Denatured alcohol licenses	14	50
Sundry licenses	1	1
Lying-in hospitals approved.	2	1
Poultry slaughtering establishment:		
Approved	1	0
Denied	1	0
Manicure-massage	164	585
Compulsory removal to hospital	1	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	June.	May.
Visits by medical inspectors	1,813	2,246
Deaths investigated	9	14
Vaccinations	130	877

	June.	May.
Vaccination certificates	79	156
Cases brought to Boston for treatment	54	76
Antitoxin administered	43	12

NURSING SERVICE.

	June.	May.
Communicable diseases, visits	3,672	4,046
Babies visited:		
First visits	748	579
Revisits	2,709	1,908
Total visits by nurses	7,129	6,533

HEALTH UNIT (Blossom Street).

Health Department proper:	June.	May.
Vaccinations	67	875
Vaccination certificates issued	28	155
Cases visited by nurses:		
Communicable diseases	167	190
Babies	95	54
Complaints received of insanitary conditions	18	16
Totals	280	260

Jewish Welfare Center:	
Conferences held	3
Number of children attending conferences	30
Total attendances	30
Visitors:	
City	2
Out of city	5
General:	
Number of persons applied for information	803
Number of persons given information	803

	June.	May.
Baby Hygiene Association:		
Babies cared for	416	421
Babies newly admitted	23	30
Babies readmitted	1	0

	June.	May.
Conferences:		
Number	9	8
Total attendance	431	374
Home visits by nurses,	771	575

	June.	May.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	24	51
Consumptives' Hospital Department:		
Calls by nurses in district	832	152
Instructive District Nursing Association:		
Visits made by nurses	1,750	2,080

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	June.	May.
New reports	689	585
Sanitary defects remedied	373	254
Referred to sanitary division	107	62
Complaints at office	37	164
Milk applications approved	229	37
Stores inspected	2,519	2,230
Pedlers:		
Applications for licenses approved	243	198
Vehicles inspected and approved	639	501
Court cases	27	21
Fines	$45	$295

ARTICLES CONDEMNED.

By Request.			
Hogs	3	Beef	4 pounds.
Bacon	18 pounds.	Salami	24 pounds.
Tongue	3 pounds.	Frankfurts	15 pounds.
Ham	12 pounds.	Pigs' feet	10 pounds.
Herring	110 pounds.	Olives	450 pounds.
Shrimp	94 gallons.	Molasses	6 cans.
White fish	3 pounds.	Macaroni	841 pounds.
Salmon	7 pounds.	Oats	40 pounds.
Miscellaneous fish	1,125 pounds.	Pickles	162 gallons.
Lard	10 pounds.	Butter	19 pounds.
Cheese	605 pounds.	Currants	110 pounds.
Tomato paste	5 pounds.	Apricots	65 cans.
Evaporated milk	80 cans.	Raisins	6 pounds.
Ice cream cones	274,200	Walnuts	1,500 pounds.
		Cookies	100 pounds.

ARTICLES CONDEMNED.—Continued.

WITHOUT REQUEST.

Poultry	112 pounds.
Pork	6 pounds.
Liver	15 pounds.
Beef	367 pounds.
Frankfurts	9 pounds.
Bacon	2 pounds.
Veal	36 pounds.
Fish	28 pounds.
Blueberries	30 pounds.
Walnuts	36 pounds.
Raspberries	288 pounds.
Raisins	82 pounds.
Oranges	5 dozen.
Turnips	½ bushel.
Carrots	¾ bushel.
Tomatoes	10 pounds.
Asparagus	1½ bushels.
Potatoes	27 bushels.
Eggs	5 dozen.
Liquid eggs	3 pints.
Salad cream	8 bottles.
Beans	4 cans.
Miscellaneous canned goods	12 cans.
Corn	5 dozen.
Cheese	82 pounds.
Condensed milk	6 cans.

Samples submitted for examination to Bacteriological Laboratory:

Clams	1
Potato salad	1
Codfish	1
Olives	1
Total	4

Chemical Laboratory:

Frankfurts	1
Steak	1
Total	2

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	June.	May.
Cattle inspected	112	89
Calves inspected	341	1,828
Swine inspected	3,604	4,311
Sheep inspected	1	0
Parts condemned	2	7
Animals condemned	135	186

DAIRY DIVISION.

	June.	May.
Dairies inspected	664	624
Scoring above 50*	344	405
Scoring below 50	320	219
With milk room	282	350
Without milk rooms	382	274
Inactive	5	9

BUREAU OF MILK INSPECTION.

	June.	May.
Chemical examinations:		
Of milk	1,275	1,364
Of ice cream	20	2
Of vinegar	52	28
Miscellaneous	8	8
Bacteriological examinations:		
Of milk	637	856
Of ice cream	83	122
Court cases	16	0
Fines	$170	0

SANITARY DIVISION.

	June.	May.
Original inspections	1,296	1,391
New reports	2,305	2,183
Reinspections	5,852	5,656
Legal notices served	425	599
Car reports	1,411	1,253
Complaints	1,109	908
Court cases	23	20
Fines	$180.10	$122.60

* Passable mark.

HOUSING SERVICE.

	June.	May.		June.	May.
Interior rooms lighted and ventilated	7	25	Halls lighted and ventilated	7	2
Water-closets:			Yards paved and drained	11	5
Interior lighted and ventilated	73	51	Privies abolished on water-front	0	1
Number installed	7	14	Basements vacated	0	2
Removed from cellars	9	4	Old buildings removed	3	5

BACTERIOLOGICAL LABORATORY.

	June.	May.
Examinations for diagnosis and release:		
Diphtheria	1,376	1,803
Tuberculosis	292	305
Typhoid	86	77
Gonorrhea	562	648
Gonorrheal ophthalmia	63	54
Syphilis	1,105	1,005
Other examinations	*40	†42
Bacteriological examinations:		
Of milk	605	889
Of ice cream	83	143

* Paratyphoids, 10; lung for T. B., 1; codfish for molds, 1; spinal fluid for meningicocci, 1; blood for typhus, 1; smear for dark field illumination, 3; culture for virulence, 2; organs from hogs, 3, disinfectants for efficiency, 1; malaria, 7; genito-urinary T. B., 10.

† Dextro-maltose for organisms, 4; paratyphoids, 22; ketchup for yeast and molds, 1; spinal fluid for T. B., 1 malaria, 4; genito-urinary tuberculosis, 10.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING JUNE, 1921.

Classification.	Number.	Percentage.
After death	7	13.46
7 days or less	7	13.46
8 to 14 days, inclusive	1	1.92
15 to 21 days, inclusive	3	5.77
22 to 31 days, inclusive	5	9.62
Within First Month	23	44.23
Within second month	3	5.77
Within third month	2	3.85
Within fourth month	1	1.92
Within fifth month	1	1.92
Within sixth month	3	5.77
Within seventh month	1	1.92
Within eighth month	1	1.92
Within ninth month	1	1.92
Within tenth month	2	3.85
Within eleventh month	1	1.92
Within twelfth month	1	1.92
Within First Year Preceding Death	40	76.91
Within second year	4	7.69
Within third year	3	5.77
More than three years	5	9.62
Totals	52	99.99

VITAL STATISTICS, JUNE, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JUNE, 1921, WITH COMPARATIVE FIGURES FOR JUNE, 1920.

	CASES AND DEATHS.					
	ACTUAL NUMBER.			RATE PER 1,000 POPULATION, EXCEPT WHERE OTHERWISE SPECIFIED.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
ALL CAUSES:						
Total deaths	734	781	—46	11.62	12.47	—.85
Nonresidents deducted	606	644	—38	9.59	10.29	—.70
BY AGE:						
Under one year	91	126	—35	1.44	2.01	—.57
One year to four years, inclusive	58	60	—2	.91	.95	—.04
Sixty years and over	263	259	+4	4.16	4.13	+.03
BY SPECIAL CAUSES:						
DEGENERATIVE DISEASES, SO CALLED:						
Appolexy	28	60	—32	.44	.95	—.51
Arterio-sclerosis	36	39	—3	.57	.62	—.05
Heart disease	108	86	—22	1.71	1.37	+.34
Nephritis, chronic	44	42	+2	.69	.67	+.02
INFANT AND MATERNAL MORTALITY:						
a. Total registered births and stillbirths	1,588	1,698	—110	25.15	27.12	—1.97
b. Registered stillbirths	46	66	—20	.72	1.05	—.33
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	28.15	37.41	—9.26
c. Deaths of mothers from causes incident to childbirth	15	12	+3	.23	.19	+.04
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.17	6.80	+2.37
d. Deaths of children in first year of life	91	126	—15	1.44	2.01	—.57
Deaths in first year per 1,000 live births,	.....	.....	.....	57.30	74.20	—16.90
VIOLENCE:						
Accidents	40	31	+9	.63	.49	+.14
Homicides	2	10	—8	.03	.15	—.12
Suicides	7	11	—4	.11	.17	—.06
MISCELLANEOUS:						
Alcoholism, acute or chronic	1	3	—2	.01	.04	—.03
Broncho-pneumonia	33	27	+6	.52	.43	+.09
Cancer	91	77	+14	1.44	1.22	+.22
Cirrhosis of the liver	3	4	—1	.04	.06	—.02
Diabetes mellitus	15	18	—3	.23	.28	—.05
Diarrhœal diseases, children under two years of age	5	17	—12	.07	.27	—.20

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases...	2	1	+1	.03	.01	+.02
Deaths..	.....	.....	.....	.....	.....	.....
Cerebro-spinal meningitis.....Cases...	2	4	—2	.03	.06	—.03
Deaths..	1	4	—3	.01	.06	—.05
Diphtheria.....Cases...	223	159	+64	3.53	2.53	+1.00
Deaths..	8	13	—5	.12	.20	—.08
Influenza.....Cases...	3	12	—9	.04	.19	—.15
Deaths..	2	1	+1	.03	.01	+.02
Measles.....Cases...	445	601	—156	7.04	9.60	—2.56
Deaths..	3	1	+2	.04	.01	+.03
Pneumonia (lobar).....Cases...	58	62	—4	.91	.99	—.08
Deaths..	18	18	.....	.28	.28	.....
Scarlet fever.....Cases...	146	158	—12	2.31	2.52	—.21
Deaths..	6	5	+1	.09	.07	+.02
Tuberculosis (pulmonary).....Cases...	217	205	+12	3.43	3.27	+.16
Deaths..	60	68	—8	.95	1.08	—.13
Tuberculosis (other forms).....Cases...	42	33	+9	.66	.53	+.13
Deaths..	9	14	—5	.14	.22	—.08
Typhoid fever.....Cases...	8	15	—7	.12	.23	—.11
Deaths..	.....	2	—2	.....	.03	—.03
Whooping cough.....Cases...	69	233	—164	1.09	3.72	—2.63
Deaths..	3	11	—8	.04	.17	—.13

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of reported live births per 1,000.

DEATHS AND DEATH RATES FOR CERTAIN NEW ENGLAND CITIES, JUNE, 1921,*

City.	Population Estimates July 1, 1921.	Deaths During Week Ending.				Death Rates During Week Ending.			
		June 25.	June 18.	June 11.	June 4.	June 25.	June 18.	June 11.	June 4.
Boston	757,634	204	161	195	157	14.0	11.1	13.4	10.9
Bridgeport	149,967	24	32	23	36	8.3	11.1	8.0	12.5
Cambridge	110,444	29	19	20	25	13.7	9.0	9.4	11.8
Fall River	120,668	[1] 24	[1] 29	[1] 30	[1] 21	[1] 10.4	[1] 12.5	[1] 13.0	[1] 9.1
Lowell	113,757	16	24	18	30	7.3	11.0	8.3	13.8
New Bedford	125,012	23	31	26	31	9.6	12.9	10.8	12.9
Providence	239,645	57	62	53	66	12.4	13.5	11.5	14.4
Springfield	135,877	25	23	32	21	9.6	8.8	12.3	8.1
Worcester	184,972	34	47	47	46	9.6	13.2	13.2	13.0

[1] Figures for weeks ending June 3, 10, 17, 24.

*Figures from the "Weekly Health Index," published by the United States Bureau of the Census.

SUMMARY OF THE WORK, JULY, 1921.

BUREAU OF ADMINISTRATION.

	July.	June.
Conferences	3	3
Hearings	4	4
Prosecutions ordered	43	50
Orders	7	3
Special drafts	1	1

Personnel:	July.	June.
Appointments	2	4
Promotions	0	1
Appointments, temporary	3	0
Leaves of absence	4	0
Resignations	1	0

LICENSES, PERMITS, ETC., ISSUED.

	July.	June.
Burial permits	898	887
Disinterment permits	19	16
Milk licenses	128	780
Pedlers licenses	209	233
Hen licenses:		
Granted	31	166
Refused	0	2
Dump licenses	3	5
Manure licenses	0	1
Denatured alcohol licenses	0	14
Culture stations established	1	0

	July.	June.
Culture stations discontinued	2	0
Lying-in hospital	1	0
Contracts	2	0
Undertakers appointed	3	1
Sundry licenses	0	1
Lying-in hospitals approved	0	2
Manicure-massage:		
Granted	16	164
Compulsory removal to hospital	2	1
Forcible removal	2	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	July.	June.
Visits by medical inspectors	1,292	1,813
Deaths investigated	10	9
Vaccinations	70	130

	July.	June.
Vaccination certificates	38	79
Cases brought to Boston for treatment	38	54
Antitoxin administered	11	43

NURSING SERVICE.

	July.	June.
Communicable diseases, visits	2,404	3,672
Babies visited:		
First visits	717	748
Revisits	3,108	2,709
Total visits by nurses	6,229	7,129

HEALTH UNIT (Blossom Street).

Health Department proper:	July.	June.
Vaccinations	9	67
Vaccination certificates issued	6	28
Cases visited by nurses:		
Communicable diseases	77	167
Babies	27	95
Complaints received of insanitary conditions	26	18
Totals	208	280

	July.	June.
Baby Hygiene Association:		
Babies cared for	424	416
Babies newly admitted	23	23
Babies readmitted	0	1

	July.	June.
Conferences:		
Number	8	9
Total attendance	431	431
Home visits by nurses	665	771

	July.	June.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	31	24
Consumptives' Hospital Department:		
Calls by nurses in district	743	832
Instructive District Nursing Association:		
Visits made by nurses	1,455	1,750
Jewish Welfare Center:		
Conferences held	3	3
Number of children attending conference	18	30
Total attendances	18	30
Visitors:		
City	19	2
Out of city	0	5
General:		
Number of persons applied for information	210	803
Number of persons given information	210	803

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	July.	June.
New reports	419	689
Sanitary defects remedied	221	373
Referred to Sanitary Division	107	107
Complaints at office	72	37
Milk applications approved	102	229
Stores inspected	1,813	2,519
Pedlers:		
Applications for licenses approved	203	243
Vehicles inspected and approved	596	639
Court cases	36	27
Fines	$730	$45

CONDEMNATIONS.

By Request.			
Apples, sliced	5 cans.	Macaroni	115 pounds.
Candy	8 boxes.	Pickles	64 barrels.
Lamb	107 pounds.	Marshmallow cream,	18 dozen.
Pork	7 pounds.	Plums	3 cans.
Poultry	32 pounds.	Potatoes	89 barrels.
Onions	10,000 pounds.	Peaches	449 crates.
Sausage	14 jars.	Pigeons	10 pounds.
Squabs	40 pounds.	Tomatoes	10 crates.
Beef	81 pounds.	Veal	62 pounds.
Frankfurts	100 pounds.	Watermelon	800 pounds.
		Watermelon	1 carload.

CONDEMNATIONS.— Concluded.

WITHOUT REQUEST.

Fats	300 pounds.
Corned shoulder	18 pounds.
Poultry	33 pounds.
Liver	48 pounds.
Beef	25 pounds.
Frankfurts	15 pounds.
Bacon	5 pounds.
Veal	2,537 pounds.
Corned beef	30 pounds.
Ham	15 pounds.
Crab meat	144 cans.
Currants	10 cases.
Apples	7 bushels.
Apples	5 pounds.
Beets	5 pounds.
Canteloupe	15 crates.
Chickens	60 pounds.
Tongue	32 pounds.
Sugar	1 case.
Spare ribs	12 pounds.
Smoked shoulder	7½ pounds.
Salt pork	200 pounds.
Salmon	9 pounds.
Plucks and sweetbreads,	6 pounds.
Plucks	49 pounds.
Pickles	100 quarts.
Olives	389 barrels.
Olives	2,200 pounds.
Onions	39,480 pounds.
Peaches	48 quarts.
Tomatoes	144 cans.
Prunes	2 cases.
Prunes	5 pounds.
Misc. canned goods	50 cans.
Corn	49 bushels.
Candy	57 pounds.
Haddock	300 pounds.
Lard	100 pounds.
Liver and sweetbreads,	48 pounds.
Evaporated milk	374 No. 1 cans.
Evaporated milk	16 gal. cans.

Samples submitted for examination to

Bacteriological laboratory:	
Clams	1
Potato salad	1
Ripe olives	1
Total	3
Chemical Laboratory:	
Pears	6
Orangeade	1
Soda syrups	7
Dye	1
Total	15

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	July.	June.		July.	June.
Cattle inspected	111	112	Sheep inspected	0	1
Calves inspected	329	341	Parts condemned	139	2
Swine inspected	3,122	3,604	Animals condemned	7	135

DAIRY DIVISION.

	July.	June.		July.	June.
Dairies inspected	624	664	With milk rooms	361	282
Scoring above 50*	404	344	Without milk rooms	263	382
Scoring below 50	220	320	Inactive	6	5

BUREAU OF MILK INSPECTION.

	July.	June.		July.	June.
Chemical examinations:			Bacteriological examinations:		
Of milk	1,064	1,275	Of milk	530	637
Of ice cream	83	20	Of ice cream	61	83
Of vinegar	25	52	Court cases	48	16
Miscellaneous	16	8	Fines	$770	$170

* Passable mark.

SANITARY DIVISION.

	July.	June.		July.	June.
Original inspections	921	1,296	Car reports	1,116	1,411
New reports	2,125	2,305	Complaints	1,158	1,109
Reinspections	4,555	5,852	Court cases	26	23
Legal notices served	370	425	Fines	$101 50	$180 10

HOUSING SERVICE.

	July.	June.		July.	June.
Interior rooms lighted and ventilated	15	7	Halls lighted and ventilated	5	7
Water-closets:			Yards paved and drained	3	11
Interior lighted and ventilated	61	73	Sinks removed from halls to kitchens	2	34
Number installed	5	7	Old buildings removed	9	3
Removed from cellars	0	9			

BACTERIOLOGICAL LABORATORY.

Examinations for diagnosis and release:

	July.	June.
Diphtheria	841	1,376
Tuberculosis	180	292
Typhoid	56	86
Gonorrhea	570	562
Gonorrheal ophthalmia	66	63
Syphilis	864	1,005
Other examinations	35*	40
Bacteriological examinations:		
Of milk	560	605
Of ice cream	61	83

* Paratyphoids, 4; codfish for molds, 0; spinal fluid for meningococci, 1; blood for typhus, 2; smear for dark field illumination, 4; culture for virulence, 2; malaria, 14; genito-urinary, 5; ripe olives for decomposition, 1; clams for toxins, 0; potato salad for toxin, 1.

Paratyphoids, 10; lung for T. B., 1; codfish for molds, 1; spinal fluid for meningococci, 1; blood for typhus, 1; smear for dark field illumination, 3; culture for virulence, 2; organs from hogs, 3; disinfectants for efficiency, 1; malaria, 7; genito-urinary T. B., 10.

DEATHS AND DEATH RATES FOR CERTAIN CITIES, JULY, 1921.

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.					Death Rates During Week Ending.				
		July 2.	July 9.	July 16.	July 23.	July 30.	July 2.	July 9.	July 16.	July 23.	July 30.
Boston	757,634	150	149	155	166	203	10.4	10.3	10.6	11.4	14.0
Bridgeport	149,967	23	28	21	.....	24	8.0	9.7	7.3	.....	8.3
Cambridge	110,444	24	22	26	16	28	11.3	10.4	12.3	7.6	13.2
Fall River	120,668	24	24	39	24	33	10.4	10.4	16.9	10.4	14.3
Lowell	113,757	23	20	17	30	34	10.5	9.2	7.8	13.8	15.6
New Bedford	125,012	24	17	24	20	26	10.0	7.1	10.0	8.3	10.8
Providence, R.I.	239,645	66	35	36	54	47	14.4	7.6	7.8	11.8	10.2
Springfield	135,877	22	26	15	20	26	8.4	10.0	5.8	7.7	10.
Worcester	184,972	30	54	48	32	45	8.5	15.2	13.5	9.0	12.7

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING JULY, 1921.

Classification.	Number.	Percentage.
After death	9	16.98
7 days or less	4	7.55
8 to 24 days, inclusive	2	3.77
15 to 21 days, inclusive	1	1.89
22 to 31 days, inclusive	2	3.77
Within First Month	18	33.96
Within second month	3	5.66
Within third month	6	11.32
Within fourth month	4	7.55
Within fifth month	1	1.89
Within sixth month	—	—
Within seventh month	2	3.77
Within eighth month	—	—
Within ninth month	1	1.89
Within tenth month	1	1.89
Within eleventh month	1	1.89
Within twelfth month	—	—
Within First Year Preceding Death	37	69.82
Within second year	10	18.87
Within third year	4	7.55
More than three years	2	3.77
Totals	53	100.01

VITAL STATISTICS, JULY, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JULY, 1921, WITH COMPARATIVE FIGURES FOR JULY, 1920.

	CASES AND DEATHS,					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase Decrease.
All Causes:						
Total deaths	**746**	694	—52	**11.81**	11.08	+.73
Nonresidents deducted	**594**	553	—41	**9.41**	8.83	+.58
By Age:						
Under one year	**108**	111	—3	**1.71**	1.77	—.06
One year to four years, inclusive	**58**	40	+18	**.92**	.63	+.29
Sixty years and over	**232**	240	—8	**3.67**	3.83	—.16
By Special Causes:						
Degenerative Diseases, so Called:						
Apoplexy	**37**	45	—8	**.58**	.72	—.14
Arterio-sclerosis	**34**	42	—8	**.53**	.67	—.14
Heart disease	**98**	89	+9	**1.55**	1.42	+.13
Nephritis, chronic	**28**	32	—4	**.44**	.51	—.07
Infant and Maternal Mortality:						
a. Total registered live births	**1,541**	1,641	—100	**24.41.**	26.21	—1.80
b. Registered stillbirths	**57**	49	+8	**.90**	.78	+.12
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	**35.66**	29.0	+6.66
c. Deaths of mothers from causes incident to childbirth	**17**	9	—8	**.26**	.14	+.12
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	**10.63**	5.32	+5.31
d. Deaths of children in first year of life	**108**	111	—3	**1.71**	1.77	—.06
Deaths in first year per 1,000 live births	.....	.....	.....	**70.08**	67.64	+2.44
Violence:						
Accidents	**42**	47	—5	**.66**	.75	—.09
Homicides	**3**	3	.....	**.04**	.05	—.01
Suicides	**13**	6	+7	**.20**	.09	+.11
Miscellaneous:						
Alcoholism, acute or chronic	**5**	3	—2	**.08**	.05	+.03
Broncho-pneumonia	**23**	21	+2	**.36**	.33	+.03
Cancer	**82**	71	+11	**1.29**	1.13	+.16
Cirrhosis of the liver	**2**	3	—1	**.03**	.05	—.02
Diabetes mellitus	**14**	13	+1	**.22**	.21	+.01
Diarrhœal diseases, children under two years of age	**18**	27	—9	**.28**	.43	—.15

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	7	9	—2	.11	.14	+.03
Deaths.	1	2	—1	.01	.03	—.02
Cerebrospinal meningitis.....Cases..	5	5	.....	.07	.07	.....
Deaths.	2	4	—2	.03	.06	—.03
Diphtheria.....Cases..	161	152	+9	2.55	2.42	+.13
Deaths.	11	8	+3	.17	.13	+.04
Influenza.....Cases..	.....	10	—10	.....	.16	—.16
Deaths.	.....	.....	.....	.....	.....	.....
Measles.....Cases..	263	197	+66	4.16	3.15	+1.01
Deaths.	7	3	+4	.11	.04	+.07
Pneumonia (lobar).....Cases..	21	27	—6	.33	.43	—.10
Deaths.	13	18	—6	.20	.28	—.08
Scarlet Fever.....Cases..	56	83	—27	.88	1.32	—.44
Deaths.	3	2	+1	.04	.03	+.01
Tuberculosis (pulmonary).....Cases..	180	207	—27	2.85	3.32	—.47
Deaths.	63	65	—2	.99	1.03	—.04
Tuberculosis (other forms).....Cases..	25	30	—5	.36	.47	—.08
Deaths.	8	11	—3	.13	.17	—.04
Typhoid fever.....Cases..	8	20	—12	.13	.32	—.19
Deaths.	2	1	+1	.03	.01	+.02
Whooping cough.....Cases..	33	232	—199	.52	3.71	—3.19
Deaths.	1	11	—10	.016	.17	—.16

SUMMARY OF THE WORK, AUGUST, 1921.

BUREAU OF ADMINISTRATION.

	Aug.	July.
Conferences	6	3
Hearings	4	4
Prosecutions ordered	65	43
Orders	6	7
Special drafts	1	1

Personnel:	Aug.	July.
Appointments	1	2
Temporary appointments	2	3
Resignation	0	1
Leave of absence	4	4
Leave of absence terminated	0	1

LICENSES, PERMITS, ETC., ISSUED.

	Aug.	July.
Undertakers appointed	1	3
Forcible removals	0	2
Culture stations established	0	1
Culture stations discontinued	0	2
Lying-in hospital	0	1
Contracts	0	2
Burial permits	936	898
Disinterment permits	5	19
Milk licenses	125	128
Pedlers' licenses	163	209
Hen licenses:		
Granted	89	31

	Aug.	July.
Dump licenses	1	3
Stable applications approved	0	2
Stable applications refused	0	1
Stable permits granted	2	0
Denatured alcohol licenses,	6	0
Sundry licenses	1	0
Lying-in hospitals approved	3	0
Manicure-massage:		
Granted	12	16
Day nurseries	3	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Aug.	July.
Visits by medical inspectors	882	1,292
Deaths investigated	18	10
Vaccinations	92	70

	Aug.	July.
Vaccination certificates	22	38
Cases brought to Boston for treatment	40	38
Antitoxin administered	7	11

NURSING SERVICE.

	Aug.	July.
Communicable diseases, visits	1,483	2,404
Babies visited:		
First visits	454	717
Revisits	3,461	3,108
Total visits by nurses	5,398	6,229

HEALTH UNIT (Blossom Street).

Health Department proper:	Aug.	July.
Vaccinations	176	9
Vaccination certificates issued	69	6
Cases visited by nurses:		
Communicable diseases	71	77
Babies	187	27
Complaints received of insanitary conditions	13	26
Totals	261	208

	Aug.	July.
Baby Hygiene Association:		
Babies cared for	207	424
Babies newly admitted,	30	23

	Aug.	July.
Conferences:		
Number	5	8
Total attendance	369	431
Home visits by nurses	423	665

Boston Dispensary:		
Calls by district physician from Boston Dispensary	46	31
Consumptives' Hospital Department:		
Calls by nurses in district	540	743
Instructive District Nursing Association:		
Visits made by nurses	1,912	1,455
Jewish Welfare Center:		
Conferences held	0	3
Number of children attending conferences	0	18
Total attendance	0	18
Visitors:		
City	24	19
Out of city	1	0
General:		
Number of persons applying for information	212	210
Number of persons given information	212	210

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Aug.	July.
New reports	715	419
Sanitary defects remedied	281	221
Referred to Sanitary Division	67	107
Complaints at office	50	72
Milk applications approved	116	102
Stores inspected	2,298	1,813
Pedlers:		
Applications for licenses approved	173	203
Vehicles inspected and approved	667	596
Court cases	89	36
Fines	$2,895	$730

CONDEMNATIONS.

By Request.		Without Request.	
Corned beef	4½ pounds.	Corn shoulder	140 pounds.
Salt herring	100 pounds.	Corned beef	172 pounds.
Salmon	367 cases.	Poultry	86 pounds.
Cheese	72½ pounds.	Liver	40 pounds
Tomatoes	1,211 cases.	Beef	46½ pounds.
Beans	64 cans.	Frankfurts	2 cans.
Drinking cups	4,000	Veal	790 pounds.
Salt codfish	107 pounds.	Lamb	24 pounds.
Sausage	445 pounds.	Clams	1 can.
Beef	1,235 pounds.	Fish	2 cans.
Oats	12 dozen.	Cantaloupes	16,858

CONDEMNATIONS.— Concluded.

Walnuts (1 bushel),	1,357 pounds.
Bacon	2 pounds.
Bacon and backs	106 pounds.
Bread	2 pounds.
Candy (1 pound)	39 boxes.
Olives (black)	1,588 pounds.
Olives (green)	175 pounds.
Olives	2,100 pounds.
Milk	2 cans.
Macaroni	600 pounds.
Lobster	6 pounds.
Liver and sweetbread	7 pounds.
Lima beans	1 can.
Ice cream cones	100,500
Honeymelons	400
Herring	14,775 pounds.
Hamburg steak	1 pound.
Ham	318 pounds.
Filberts	140 pounds.
Figs	3,711 pounds.
Tomatoes	14 pounds.
Beans	20 pounds.
Corn flakes	5 packages.
Crackers	220 pounds.
Miscellaneous canned goods	11 cases.
Corn	1 can.
Condensed milk	1 can.
Cocoanut	1 can.
Cocoanut pulp	4½ pounds.
Dates	390 pounds.
Dates (stuffed)	75 pounds.
Eromine	33 pounds.
Olive butter	3 jars.
Peanuts	155 pounds.
Peanut crispies	73½ pounds.
Peas	64 pounds.
Peas	23 cans.
Pumpkins	1 can.
Prunes	98½ pounds.
Rolls	360 pounds.
Salami	250 pounds.
Salt fish	300 cases.
Sardines	2 cans.
Shad	27 pounds.
Shredded wheat	38 boxes.
Shoulder	597 pounds.
Spinach	3 cans.
Soup	48 cans.
Sweet pickles	5 pounds.
Walnut meats	17 bushels.
Watermelons	26

Samples submitted for examination to Bacteriological Laboratory:

Clams	1
Walnut meat	1
Ham	1
Total	3

To Chemical Laboratory:

Ice cream	1
Butter	1
Jam	1
Gas	1
Walnut meat	1
Sausage	4
Frankfurts	4
Olive oil	2
Floyosan	1
	16

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Aug.	July.		Aug.	July.
Cattle inspected	188	111	Sheep inspected	3	0
Calves inspected	273	329	Parts condemned	224	139
Swine inspected	3,968	3,122	Animals condemned	5	7

DAIRY DIVISION.

	Aug.	July.		Aug.	July.
Dairies inspected	677	624	With milk rooms	223	361
Scoring above 50*	303	404	Without milk rooms	454	263
Scoring below 50	374	220	Inactive	4	6

* Passable mark.

BUREAU OF MILK INSPECTION.

	Aug.	July.
Chemical examinations:		
Of milk	1,218	1,064
Of ice cream	58	83
Of vinegar	145	25
Miscellaneous	21	16

	Aug.	July.
Bacteriological examinations:		
Of milk	752	530
Of ice cream	83	61
Court cases	29	48
Fines	$890	$770

SANITARY DIVISION.

	Aug.	July.
Original inspections	898	921
New reports	1,912	2,125
Reinspections	5,677	4,555
Legal notices served	293	370

	Aug.	July.
Car reports	1,268	1,116
Complaints	1,103	1,158
Court cases	14	26
Fines	$5	$101.50

HOUSING SERVICE.

	Aug.	July.
Interior rooms lighted and ventilated	29	15
Water-closets:		
Interior lighted and ventilated	84	61
Number installed	6	5
Removed from cellars	4	0

	Aug.	July.
Halls lighted and ventilated	2	5
Yards paved and drained	3	3
Sinks removed from halls to kitchens	24	2
Old buildings removed	8	9
Water-closets floor waterproof	6	0

BACTERIOLOGICAL LABORATORY.

	Aug.	July
Examination for diagnosis and release:		
Diphtheria	686	841
Tuberculosis	199	180
Typhoid	101	56
Gonorrhea	556	570
Gonorrheal ophthalmia	62	66
Syphilis	855	864
Other examinations	*38	†35
Bacteriological examinations:		
Of milk	702	560
Of ice cream	104	61

* Paratyphoids, 12; nut meats for weevils, 1; blood for typhus, 1; smear for dark field illumination, 2; clams for coli, 1; malaria, 10; genito-urinary, 6; clams for typhoid, 1; apple jam for poison, 1; smears for actinomycosis, 2; dates for parasites, 1.

† Paratyphoids, 4; spinal fluid for meningococci, 1; blood for typhus, 2; smear for dark field llumination, 4; culture for virulence, 2; malaria, 14; genito-urinary, 5; ripe olives for decomposition, 1; potato salad for toxin, 1.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING AUGUST, 1921.

Classification.	Number.	Percentage.
After death	6	10.7
7 days or less	5	8.9
8 to 14 days, inclusive	2	3.6
15 to 21 days, inclusive	2	3.6
22 to 31 days, inclusive	1	1.8
Within first month	16	28.6
Within second month	10	17.9
Within third month	4	7.1
Within fourth month	4	7.1
Within fifth month	3	5.4
Within sixth month	2	3.6
Within seventh month	1	1.8
Within eighth month	—	—
Within ninth month	1	1.8
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within first year preceding death	41	73.3
Within second year	9	16.1
Within third year	1	1.8
More than three years	5	8.9
Total	56	100.1

DEATHS AND DEATH RATES FOR CERTAIN CITIES, AUGUST, 1921.

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.				Death Rates During Week Ending.			
		Aug. 6.	Aug. 13.	Aug. 20.	Aug. 27.	Aug. 6.	Aug. 13.	Aug. 20.	Aug. 27.
Boston	757,634	158	168	194	174	10.9	11.6	13.4	12.0
Bridgeport	149,967	23	23	16	30	8.0	8.0	5.6	10.4
Cambridge	110,444	23	24	22	18	10.9	11.3	10.4	8.5
Fall River	120,668	32	24	26	30	13.8	10.4	11.2	13.0
Lowell	113,757	26	24	27	22	11.9	11.0	12.4	10.1
New Bedford	125,012	20	24	22	24	8.3	10.0	9.2	10.0
Providence, R. I.	239,645	51	56	58	59	11.1	12.2	12.6	12.8
Springfield	135,877	21	37	38	21	8.1	14.2	14.6	8.1
Worcester	184,972	37	32	39	35	10.4	9.0	11.0	9.9

VITAL STATISTICS, AUGUST, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING AUGUST, 1921, WITH COMPARATIVE FIGURES FOR AUGUST, 1920.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	766	815	—49	12.13	13.02	—.89
Nonresidents deducted	637	655	—18	10.08	10.46	—.38
By Age:						
Under one year	151	194	—43	2.39	3.10	—.71
One year to four years, inclusive	41	65	—24	.65	1.04	—.39
Sixty years and over	256	241	+15	4.05	3.84	+.21
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	56	42	+14	.89	.67	+.22
Arterio-sclerosis	29	45	—16	.62	.72	—.10
Heart disease	98	78	+20	1.55	1.24	+.31
Nephritis, chronic	34	38	—4	.54	.61	—.07
Infant and Maternal Mortality:						
a. Total registered live births	1,764	1,744	+20	27.94	27.85	+.09
b. Registered stillbirths	68	51	+17	1.07	.81	+.26
Stillbirths per 1,000 births and stillbirths,	.....	.....	.....	37.12	28.41	+8.71
c. Deaths of mothers from causes incident to childbirth	5	9	—4	.08	.14	—.06
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	2.73	5.01	—2.28
d. Deaths of children in first year of life	151	194	—43	2.39	3.10	—.71
Deaths in first year per 1,000 live births,	.....	.....	.....	85.60	111.23	—25.63
Violence:						
Accidents	31	53	—22	.49	.85	—.36
Homicides	2	1	+1	.03	.016	+.01
Suicides	9	8	+1	.14	.13	+.01
Miscellaneous:						
Alcoholism, acute or chronic	2	2	.....	.03	.03	.....
Broncho-pneumonia	25	20	+5	.39	.31	+.08
Cancer	90	93	—3	1.42	1.48	—.06
Cirrhosis of the liver	4	2	+2	.06	.03	+.03
Diabetes mellitus	11	9	+2	.17	.14	+.03
Diarrhœal diseases, children under two years of age	59	80	—21	.93	1.28	—.35

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases...	14	56	—42	.22	.89	—.67
Deaths..	6	16	—10	.09	.25	—.16
Cerebro-spinal meningitis.....Cases...	4	3	+1	.06	.05	+.01
Deaths..	3	3	.....	.05	.05	.....
Diphtheria.....Cases...	148	122	+26	2.34	1.95	+.39
Deaths..	13	5	+8	.20	.08	+.12
Influenza.....Cases...	1	2	—1	.01	.03	—.02
Deaths..	1	1	.....	.01	.01	.....
Measles.....Cases...	68	51	+17	1.07	.81	—.26
Deaths..	2	2	.....	.03	.03	.....
Pneumonia (lobar).....Cases...	32	18	+14	.51	.29	+.22
Deaths..	10	10	.....	.16	.16	.....
Scarlet fever.....Cases...	54	69	—15	.85	1.10	—.25
Deaths..	2	1	+1	.03	.01	+.02
Tuberculosis (pulmonary).....Cases...	193	189	+4	3.02	3.02	.....
Deaths..	57	54	+3	.90	.86	+.04
Tuberculosis (other forms).....Cases...	24	17	+7	.38	.27	+.11
Deaths..	10	9	+1	.16	.14	+.02
Typhoid fever.....Cases...	25	18	+7	.39	.29	+.10
Deaths..	4	1	+3	.06	.01	+.05
Whooping cough.....Cases...	50	152	—102	.79	2.42	—1.63
Deaths..	2	17	—15	.03	.27	—.24

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated populations for July, 1921, and 1920, based upon the federal census of 1920 have been used.

SUMMARY OF WORK, SEPTEMBER, 1921.

BUREAU OF ADMINISTRATION.

	Sept.	Aug.		Sept.	Aug.
Conferences	6	6	Appointments	2	1
Hearings	4	4	Appointments temporary	5	2
Prosecutions ordered	66	65	Appointments terminated	5	0
Orders	6	6	Undertakers appointed	2	1
Special drafts	1	1	Leaves of absence	1	4
Promotions	1	0	Stables approved	1	1

LICENSES, PERMITS, ETC., ISSUED.

	Sept.	Aug.		Sept.	Aug.
Burial permits	901	936	Manure licenses	1	0
Disinterment permits	13	5	Stable permits granted	1	2
Milk licenses	120	125	Denatured alcohol licenses	2	6
Pedlers' licenses	79	163	Poultry slaughtering establishments	2	0
Hen licenses:					
Granted	78	89	Manicure-massage:		
Grease, bones, etc., licenses	1	0	Granted	30	12
Dump licenses	0	1	Day nurseries	2	3
			Milk licenses revoked	3	0

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Sept.	Aug.		Sept.	Aug.
Visits by medical inspectors	1,481	882	Vaccination certificates	418	22
Deaths investigated	16	18	Cases brought to Boston for treatment	53	40
Vaccinations	468	92	Antitoxin administered	11	7

NURSING SERVICE.

	Sept.	Aug.
Communicable diseases visits	1,436	1,483
Babies visited:		
First visits	945	454
Revisits	4,306	3,461
Total visits by nurses	6,687	5,398

HEALTH UNIT (Blossom Street).

	Sept.	Aug.
Health Department proper:		
Vaccinations	406	176
Vaccination certificates issued	459	69
Cases visited by nurses:		
Communicable diseases	125	71
Babies	62	187
Complaints received of insanitary conditions	15	13
Totals	202	261

	Sept.	Aug.
Baby Hygiene Association:		
Babies cared for	240	207
Babies newly admitted	48	30

	Sept.	Aug.
Conferences:		
Number	5	5
Total attendance	442	369
Home visits by nurses	306	423

	Sept.	Aug.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	27	46
Consumptives' Hospital Department:		
Calls by nurses in district	572	540
Visits made by nurses	1,582	1,912
Jewish Welfare Center:		
Conferences held	3	0
Number of children attending conference	37	0
Total attendances	37	0
Visitors:		
City	10	24
Out of city	4	1
General:		
Number of persons applied for information	142	212
Number of persons given information	142	212

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Sept.	Aug.
New reports	483	715
Sanitary defects remedied	348	281
Referred to Sanitary Division	63	67
Complaints at office	83	50
Milk applications approved	135	116
Stores inspected	2,287	2,298
Pedlers:		
Applications for licenses approved	83	173
Vehicles inspected and approved	793	667
Court cases	7	89
Fines	$575	$2,895

ARTICLES CONDEMNED.

By Request.		Without Request.	
Pink salmon	52 cases.	Lobster	4 cans.
Corned beef (12-oz.),	12 cases.	Lamb	57 pounds.
Corned beef (24-oz.),	1 case.	Salt pork	92 pounds.
Corned beef (1-lb.)	40 cases.	Liver	1 pound.
Corned beef (6-lb.)	6 cases.	Beef	1,097 pounds.
Corned beef (2-lb.)	4 cases.	Frankfurts	80 pounds.
Roast beef (2-lb.)	10 cases.	Bacon	54 pounds.
Roast beef (12-lb.)	4 cases.	Veal	335 pounds.
Bacon (12-lb.)	4 cases.	Cocoanut (1 case)	30 pounds.
Bacon	2 cases.	Fish	320 pounds.
Chosen crab meat	28 cases.	Corned beef	90 pounds.
Prunes (2-lb.)	32 cases.	Corned beef	7 cans.

ARTICLES CONDEMNED.—Concluded.

Raisins	45 pounds.	Candy (8-doz.)	4 packages.
Cabbage	½ bushel.	Candy (6-lb.)	1 box.
Fowl	6 pounds.	Evaporated milk	9 cans.
Geese	230 pounds.	Flour	10 pounds.
Grapes	41,814 pounds.	Ham	164 pounds.
Gum	5 packages.	Hops	50 pounds.
Walnut meats	7,150 pounds.	Lard	20 pounds.
Turkey	634 pounds.	Olives (5,430 lbs.)	30 barrels.
Sweetbreads	6 pounds.	Samples submitted for examination to Bacteriological Laboratory:	
Sugar	200 pounds.	Candy	1
Spare ribs	75 pounds.	Coffee	1
Soup	1 can.	Corned beef	1
Shrimp	2 cans.	Flour screenings	1
Shoulders	516½ pounds.	Olives (Greek style)	1
Sausages	20 pounds.	Peaches	1
Salt cod	50 pounds.	Tomato sauce	1
Salmon	8 cans.		—
Plucks	1 pound.	Total	7
Pigeon	12 pounds.	Chemical Laboratory:	
Pickles	87 bottles.	Apples	1
Pears	16 boxes.	Eggs	1
Tomatoes	1 bushel.	Eromine	1
Potato salad	10 pounds.	Frankfurts	1
Macaroni	2 packages.	Olives (California)	2
Macaroni paste	1 box.	Sausages	1
Miscellaneous canned goods	64 cans.		—
Corn	3 bushels.	Total	7

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Sept.	Aug.		Sept.	Aug.
Cattle inspected	159	188	Sheep inspected	1	3
Calves inspected	146	273	Parts condemned	329	224
Swine inspected	3,899	3,968	Animals condemned	4	5

DAIRY DIVISION.

	Sept.	Aug.		Sept.	Aug.
Dairies inspected	430	677	With milk rooms	177	223
Scoring above 50*	232	303	Without milk rooms	253	454
Scoring below 50	208	374	Inactive	3	4

BUREAU OF MILK INSPECTION.

	Sept.	Aug.		Sept.	Aug.
Chemical examinations:			Bacteriological examinations:		
Of milk	1,358	1,218	Of milk	792	752
Of ice cream	15	58	Of ice cream	61	83
Of vinegar	94	145	Court cases	21	29
Miscellaneous	7	21	Fines	$255	$890

* Passable mark.

SANITARY DIVISION.

	Sept.	Aug.		Sept.	Aug.
Original inspections	924	898	Car reports	1,123	1,268
New reports	1,503	1,912	Complaints	794	1,103
Reinspections	4,556	5,677	Court cases	60	14
Legal notices served	315	293	Fines	$75.55	$5

HOUSING SERVICE.

	Sept.	Aug.		Sept.	Aug.
Interior rooms lighted and ventilated	22	29	Yards paved and drained	3	3
Water-closets:			Sinks removed from halls to kitchens	27	24
Interior lighted and ventilated	37	84	Old buildings removed	6	8
Number installed	9	6	New sinks installed	30	0
Removed from cellars	4	4	Water-closets floor waterproof	0	6
Halls lighted and ventilated	4	2			

BACTERIOLOGICAL LABORATORY.

	Sept.	Aug.
Examinations for diagnosis and release:		
Diphtheria	713	686
Tuberculosis	263	199
Typhoid	101	101
Gonorrhea	632	556
Gonorrheal ophthalmia	56	62
Syphilis	1,079	855
Other examinations*	37	38
Bacteriological examinations:		
Of milk	855	702
Of ice cream	61	104

* Paratyphoids, 6; smear for dark field illumination, 2; sausage for botulism, 1; malaria, 5; genito-urinary, 6; stools for typhoid, 1; tomato sauce for spores and yeasts, 1; candy for toxins, 1; pus from ear for staphylococcus abbus, 1; flour for adulteration, 1; water samples, 9; corned beef for toxins, 1; canned peaches for decomposition, 1; pus from finger, 1.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING SEPTEMBER, 1921.

Classification.	Number.	Percentage.
After death	13	23.21
7 days or less	2	3.57
8 to 14 days, inclusive	1	1.79
15 to 21 days, inclusive	—	—
22 to 31 days, inclusive	2	3.57
Within First Month	18	32.14
Within second month	8	14.29
Within third month	1	1.79
Within fourth month	8	14.29
Within fifth month	2	3.57
Within sixth month	2	3.57
Within seventh month	2	3.57
Within eighth month	1	1.79
Within ninth month	1	1.79
Within tenth month	2	3.57
Within eleven month	1	1.79
Within twelfth month	—	—
Within First Year Preceding Death	46	82.16
Within second year	5	8.93
Within third year	1	1.79
More than three years	4	7.14
Totals	56	100.02

DEATHS AND DEATH RATES FOR CERTAIN CITIES, SEPTEMBER, 1921.

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.				Death Rates During Week Ending.			
		Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.	Sept. 3.	Sept. 10.	Sept. 17.	Sept. 24.
Boston	757,634	171	161	167	191	11.8	11.1	11.5	13.1
Bridgeport	149,967	25	26	22	22	8.7	9.0	7.6	7.6
Cambridge	110,444	24	24	17	24	11.3	11.3	8.0	11.3
Fall River	120,668	38	34	34	31	16.4	14.7	14.7	13.4
Lowell	113,757	24	29	24	16	11.0	13.3	11.0	7.3
New Bedford	125,012	35	27	22	29	14.6	11.3	9.2	12.1
Providence, R. I.	239,645	56	47	56	57	12.2	10.2	12.2	12.4
Springfield	135,877	28	30	16	34	10.7	11.5	6.1	13.0
Worcester	184,972	48	43	33	32	13.5	12.1	9.3	9.0

VITAL STATISTICS, SEPTEMBER, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING SEPTEMBER, 1921, WITH COMPARATIVE FIGURES FOR SEPTEMBER, 1920.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	758	780	—22	12.00	12.35	—.35
Nonresidents deducted	617	642	—25	9.77	10.25	—.48
By Age:						
Under one year	125	166	—41	1.97	2.65	—.68
One year to four years, inclusive	39	61	—22	.62	.97	—.35
Sixty years and over	259	238	+21	4.10	3.80	+.30
Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	45	40	+5	.71	.64	+.07
Arterio-sclerosis	34	23	+11	.54	.37	+.17
Heart disease	99	114	—15	1.57	1.82	—.25
Nephritis, chronic	43	33	+10	.68	.53	+.15
Infant And Maternal Mortality:						
Total registered live births	1,732	1,675	+57	27.43	26.75	+.68
Registered stillbirths	50	65	—15	.79	1.04	—.25
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	*28.06	*37.35	—9.29
Deaths of mothers from causes incident to childbirth	12	5	+7	.19	.08	+.11
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	6.73	2.87	+3.86
Deaths of children in first year of life	125	166	—41	1.97	2.65	—.68
Deaths in first year per 1,000 live births	.....	.....	.....	†72.17	†99.10	—26.93
Violence:						
Accidents	47	33	+14	.74	.53	+.21
Homicides	3	1	+2	.05	.016	+.03
Suicides	8	6	+2	.13	.10	+.03
Miscellaneous:						
Alcoholism, acute or chronic	4	2	+2	.06	.03	+.03
Broncho-pneumonia	19	29	—10	.30	.46	—.16
Cancer	72	88	—16	1.14	1.40	—.26
Cirrhosis of the liver	3	.....	+3	.05	.....	+.05
Diabetes mellitus	14	11	+3	.22	.17	+.05
Diarrhœal diseases, children under two years of age	36	76	—40	.57	1.21	—.64

* Rate per 1,000 live births and stillbirths together. † Rate per 1,000 live births.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases...	**15**	121	—106	**.24**	1.93	—1.69
Deaths..	.....	19	—19	.....	.30	—.30
Cerebro-spinal meningitis.....Cases...	**3**	8	—5	**.05**	.13	—.08
Deaths..	**3**	4	—1	**.05**	.06	—.01
Diphtheria.....Cases...	**115**	126	—11	**1.82**	2.01	—.19
Deaths..	**8**	3	+5	**.13**	.05	+.08
Influenza.....Cases...	**2**	7	—5	**.03**	.11	—.08
Deaths..	.....	.....	.....	.....	.....	.....
Measles.....Cases...	**51**	21	+30	**.81**	.33	+.48
Deaths..	**1**	.....	+1	**.01**	.....	+.01
Pneumonia, lobar.....Cases...	**55**	40	+15	**.87**	.64	+.23
Deaths..	**24**	20	+4	**.38**	.32	+.06
Scarlet fever.....Cases...	**64**	69	—5	**1.02**	1.10	—.08
Deaths..	**2**	4	—2	**.03**	.06	—.03
Tuberculosis (pulmonary).....Cases...	**172**	148	+24	**2.72**	2.36	+.36
Deaths..	**65**	61	+4	**1.03**	.97	+.06
Tuberculosis (other forms).....Cases...	**27**	12	+15	**.43**	.19	+.24
Deaths..	**10**	7	+3	**.16**	.11	+.05
Typhoid fever.....Cases...	**13**	29	—16	**.20**	.46	—.26
Deaths..	**1**	1	.....	**.01**	.01	.....
Whooping cough.....Cases...	**28**	107	—79	**.44**	1.71	—1.27
Deaths..	**3**	7	—4	**.05**	.11	—.06

SUMMARY OF WORK, OCTOBER, 1921.

BUREAU OF ADMINISTRATION.

	Oct.	Sept.
Conferences	5	6
Hearings	3	4
Prosecutions ordered	128	66
Orders	9	6
Special Drafts	1	1
Bids accepted	13	0
Personnel:		
Appointments	1	1
Appointments made temporary	1	2
Appointments made permanent	1	1
Appointments terminated	1	5
Leaves of absence	6	1

LICENSES, PERMITS, ETC., ISSUED.

	Oct.	Sept.
Undertakers appointed	1	2
Burial permits	916	901
Disinterment permits	47	13
Undertakers licensed	1	2
Milk licenses	218	120
Pedlers' licenses	53	79
Hen licenses:		
Granted	71	78
Grease, bones, etc., licenses	2	1
Dump licenses	1	0
Manure licenses	3	1
Offensive trade application rejected	1	0
Lying-in hospitals approved	5	0
Culture station approved,	1	0
Bakery ordered reopened,	1	0
Bakeries ordered closed	2	0
Stables approved	2	1
Stable permit granted	0	1
Stable permit refused	1	0
Manicure-massage:		
Granted	36	30
Day nurseries	2	2

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Oct.	Sept.
Visits by medical inspectors	1,087	1,481
Deaths investigated	10	16
Vaccinations	42	468
Vaccination certificates	55	418
Cases brought to Boston for treatment	34	53
Antitoxin administered	7	11

NURSING SERVICE.

	Oct.	Sept.
Communicable diseases, visits	1,487	1,436
Babies visited:		
First visits	1,289	945
Revisits	2,935	4,306
Total visits by nurses	5,711	6,687

HEALTH UNIT (Blossom Street).

	Oct.	Sept.
Health Department proper:		
Vaccinations	42	406
Vaccination certificates issued	66	459
Cases visited by nurses:		
Communicable diseases	124	125
Babies	178	62
Complaints received of insanitary conditions	12	15
Totals	314	202

	Oct.	Sept.
Baby Hygiene Association:		
Babies cared for	266	240
Babies newly admitted	36	48
Babies readmitted	1	0

	Oct.	Sept.
Conferences:		
Number	6	5
Total attendance	323	442
Home visits by nurses	329	306

	Oct.	Sept.
Boston Dispensary:		
Calls by district physician from Dispensary	27	27
Consumptives' Hospital Department:		
Calls by nurses in district	572	572
Instructive District Nursing Association:		
Visits made by nurses	1,728	1,582
Jewish Welfare Center:		
Conferences held	3	3
Number of children attending conference	46	37
Total attendance	46	37
Visitors:		
City	15	10
Out of city	2	4
General:		
Number of persons applying for information	58	142
Number of persons given information	58	142

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Oct.	Sept.
New reports	500	483
Sanitary defects remedied	261	348
Referred to Sanitary Division	44	63
Complaints at office	48	83
Milk applications approved	132	135
Stores inspected	2,085	2,287
Pedlers:		
Applications for licenses approved	57	83
Vehicles inspected and approved	753	793
Court cases	55	7
Fines	$2,345	$575

ARTICLES CONDEMNED.

Without Request.		Carrots	3 cans.
Apricots	1 can.	Catsup	5 jars.
Asparagus	32 cans.	Cherries	74 cans.
Apples	1,170 pounds.	Miscellaneous	2,802 cans.
Apples	1½ barrels.	Miscellaneous	30 jars.
Apples	2 cans.	Clams	25 cans.
Bacon	22 cans.	Wheathearts	4 cans.
Baking powder	10 cans.	Syrup	11 cans.
Beans	74 cans.	Tomato	15 cans.
Beets	17 cans.	Tomato sauce	16 cans.
Beef and pork	53 pounds.	Tomato puree	20 cans.
Beef trimmings	20 pounds.	Tongues	6 pounds.
Blackberries	10 cans.	Tuna	2 cans.

ARTICLES CONDEMNED.— Concluded.

Vegetable	1 can.
Walnut meat	15 pounds.
Coffee	25 cans.
Condensed milk	2 cans.
Corn	20 cans.
Cornbeef	180 cans.
Cornbeef hash	132 cans.
Crabmeat	2 cans.
Currants	500 pounds.
Evaporated milk	34 cans.
Ginger	5 pounds.
Grapes	23,720 pounds.
Hash	9 cans.
Herring	1 can.
Herring	1000 pounds.
Hominy	22 cans.
Jam	11 cans.
Lamb	9 pounds.
Lobster	27 cans.
Loganberries	9 cans.
Meat, miscellaneous	43 cans.
Milk	1 can.
Mustard	1 can.
Peanuts	900 pounds.
Peaches	4 cans.
Pears	1 can.
Peas	8 cans.
Pickled shoulder	10 pounds.
Pickled pig shoulder	45 pounds.
Pickles	1 can.
Plums	6 cans.
Plucks	8 pounds.
Popcorn	8 cans.
Poultry	20 pounds.
Prunes	595 pounds.
Prunes	622 boxes.
Pineapples	2 cans.
Raisins	1 can.
Raspberries	4 cans.
Roast beef	65 cans.
Rice	2 cans.
Salmon	5 cans.
Sardines	121 cans.
Shrimp	12 cans.
Slice beef	4 pounds.
Soup	128 cans.
Spaghetti	120 cans.
Spinach	21 cans.
Squash	10 cans.
Strawberries	22 cans.
String beans	5 cans.
Sweetbread	10 pounds.
Sweet potatoes	1 can.

Samples submitted for examination to Bacteriological Laboratory:

Clams	1
Figs	1
Beefsteak	1
Ham	1
Sausage	1
Cocoa	1
Cabbage	1
Stuffed dates	1
Total	8

Chemical Laboratory:

Sugar	2
Coffee and milk	1
Sausages	3
Epsom salt	1
Veal	1
Apples	5
Cabbages	2
Olive oil	1
Total	16

LIVE STOCK INSPECTION (BRIGHTON ABATTOIR).

	Oct.	Sept.		Oct.	Sept.
Cattle inspected	145	159	Sheep inspected	2	1
Calves inspected	396	146	Parts condemned	626	329
Swine inspected	6,270	3,899	Animals condemned	8	4

DAIRY DIVISION.

	Oct.	Sept.		Oct.	Sept.
Dairies inspected	243	430	With milk rooms	158	177
Scoring above 50*	190	232	Without milk rooms	85	253
Scoring below 50	53	208	Inactive	4	3

* Passable mark.

BUREAU OF MILK INSPECTION.

	Oct.	Sept.
Chemical examinations:		
Of milk	1,220	1,358
Of ice cream	7	15
Of vinegar	0	94
Miscellaneous	1	7

	Oct.	Sept.
Bacteriological examinations:		
Of milk	595	792
Of ice cream	96	61
Court cases	31	21
Fines	$375	$255

SANITARY DIVISION.

	Oct.	Sept.
Original inspections	1,046	924
New reports	1,620	1,503
Reinspections	4,537	4,556
Legal notices served	335	315

	Oct.	Sept.
Car reports	1,059	1,123
Complaints	731	794
Court cases	97	60
Fines	$90	$75.55

HOUSING SERVICE.

	Oct.	Sept.
Interior rooms lighted and ventilated	25	22
Water-closets:		
Interior lighted and ventilated	49	37
Number installed	10	9
Removed from cellars	0	4

	Oct.	Sept.
Halls lighted and ventilated	6	4
Yards paved and drained,	2	3
Sinks removed from halls to kitchens	8	27
Old buildings removed	5	6
New sinks installed	0	30

BACTERIOLOGICAL LABORATORY.

	Oct.	Sept.
Examinations for diagnosis and release:		
Diphtheria	1,073	713
Tuberculosis	264	263
Typhoid	63	101
Gonorrhea	630	632
Gonorrheal ophthalmia	38	56
Syphilis	995	1,079
Other examinations*	36	37
Bacteriological examinations:		
Of milk	595	855
Of ice cream	62	61

* Cocoa for vermin, 1; cabbage for poison, 1; figs for decomposition and vermin, 1; sausage for foreign material 1; dark field illumination, 2; feces for hookworm, 1; water for sewage, 1; rat for lesions, 1: sausage for toxins, 1; preserved fruit for parasites, 1; stuffed dates for parasites, 1; spina.l fluid for meningococci, 1; blister for staphylococcus infection, 1; culture for Vincent's angina 1: frankfurts for botulinus, 1; marshmallow for yeast and spores, 1; steak for decomposition, 1; urine for hookworm, 2; clams for pollution, 1; genito-urinary T. B., 7; malaria, 8.

VITAL STATISTICS, OCTOBER, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING OCTOBER, 1921, WITH COMPARATIVE FIGURES FOR OCTOBER, 1920.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	**790**	797	—7	**12.51**	12.73	—.22
Nonresidents deducted	**640**	662	—22	**10.14**	10.57	—.43
By Age:						
Under one year	**103**	137	—34	**1.63**	2.18	—.55
One year to four years, inclusive	**35**	42	—7	**.55**	.66	—.11
Sixty years and over	**287**	286	+1	**4.54**	4.57	—.03
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**37**	51	—14	**.59**	.81	—.22
Arteriosclerosis	**32**	39	—7	**.51**	.62	—.11
Heart disease	**125**	99	+26	**1.98**	1.58	+.40
Nephritis, chronic	**46**	51	—5	**.73**	.81	—.08
Infant and Maternal Mortality:						
a. Total registered live births	**1,539**	1,604	—65	**24.37**	25.62	—1.25
b. Registered stillbirths	**51**	50	+1	**.81**	.80	+.01
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	**32.07**	30.22	+1.85
c. Deaths of mothers from causes incident to childbirth	**9**	12	—3	**.14**	.19	—.05
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	**5.66**	7.25	—1.59
Deaths of children in first year of life	**103**	137	—34	**1.63**	2.19	—.56
Deaths in first year per 1,000 live births	.....	.....	.....	**66.92**	85.41	—18.49
Violence:						
Accidents	**51**	41	+10	**.81**	.65	+.16
Homicides	.....	4	—4	.....	.06	—.06
Suicides	**9**	11	—2	**.14**	.17	—.03
Miscellaneous:						
Alcoholism, acute or chronic	**8**	2	+6	**.13**	.03	+.10
Broncho-pneumonia	**28**	43	—15	**.44**	.69	—.25
Cancer	**87**	76	+11	**1.38**	1.21	+.17
Cirrhosis of the liver	**4**	2	+2	**.06**	.03	+.03
Diabetes mellitus	**15**	15	.....	**.24**	.24	.....
Diarrhœal diseases, children under two years of age	**22**	33	—11	**.35**	.53	+.18

		Cases and Deaths.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1921.	1920.	Increase or Decrease.	1921.	1921.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases.	2	43	—41	.03	.67	—.64
	Deaths.	1	9	—8	.016	.14	—.12
Cerebro-spinal meinigitis	Cases.	5	1	+4	.08	.016	+.06
	Deaths.	4	.....	+4	.06	.....	+.06
Diphtheria	Cases.	199	178	+21	3.15	2.84	+.31
	Deaths.	10	13	—3	.16	.20	—.04
Influenza	Cases.	5	17	—12	.08	.27	—.19
	Deaths.	1	1	.....	.016	.016	.....
Measles	Cases.	91	34	+57	1.44	.54	+.90
	Deaths.	.....	.....	.....	.....	.....	.....
Pneumonia (lobar)	Cases.	50	66	—16	.79	1.05	—.26
	Deaths.	32	24	+8	.51	.38	+.13
Scarlet fever	Cases.	109	114	—5	1.72	1.82	—.10
	Deaths.	.....	2	—2	.....	.03	—.03
Tuberculosis (pulmonary)	Cases.	131	202	—71	2.07	3.24	—1.17
	Deaths.	55	42	+13	.87	.67	+.20
Tuberculosis (other forms)	Cases.	31	17	+14	.49	.27	+.22
	Deaths.	6	7	—1	.09	.10	—.01
Typhoid fever	Cases.	24	12	+12	.38	.19	+.19
	Deaths.	6	1	+5	.09	.016	+.07
Whooping cough	Cases.	12	64	—52	.19	1.02	—.83
	Deaths.	.....	4	—4	.....	.06	—.06

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above the estimated populations for October, 1921, and 1920 based upon the federal census of 1920 have been used.

DEATHS AND DEATH RATES FOR CERTAIN CITIES, OCTOBER, 1921.*

City.	Population Estimated July 1, 1921.	Deaths During Week Ending.					Death Rates During Week Ending.				
		Oct. 1.	Oct. 8.	Oct. 15.	Oct. 22.	Oct. 29.	Oct. 1.	Oct. 8.	Oct. 15.	Oct. 22.	Oct. 29.
Boston	757,634	.....	170	183	173	191	.....	11.7	12.6	11.9	13.1
Bridgeport	149,967	24	24	21	21	33	8.3	8.3	7.3	7.3	11.5
Cambridge	110,444	33	12	22	24	20	15.6	5.7	10.4	11.3	9.4
Fall River	120,668	25	35	25	37	25	10.8	15.1	10.8	16.0	10.8
Lowell	113,757	22	23	17	33	32	10.1	10.5	7.8	15.1	14.7
New Bedford	125,012	21	20	28	24	22	8.8	8.3	11.7	10.0	9.2
Providence, R.I.	239,645	58	54	56	61	53	12.6	11.8	12.2	13.3	11.5
Springfield	138,877	23	35	28	26	27	8.8	13.4	10.7	10.0	10.4
Worcester	184,972	34	39	55	36	42	9.6	11.0	15.5	10.1	11.8

1559

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 10. BOSTON, NOVEMBER, 1921. No. 5

DEATHS AND CONTAGIOUS DISEASES DURING NOVEMBER.

Attention has recently been called to the relatively low death rate in Boston during the first ten months of the current year as compared with the death rate for the corresponding period of 1920. This low death rate did not prevail during November, for 829 deaths were then recorded as compared with 832 of last year, and if non-residents are excluded, the number of deaths shows an increase, 697 as against 689. Analysis of these figures shows, however, a most remarkable diminution in the number of deaths among children less than five years of age and this diminution occurred notwithstanding the absence of any decline in the general death rate and notwithstanding a large increase in the number of births registered during the month.

In November, 1921, live births recorded numbered 1,566 as against 1,330 in November last year. Ordinarily about 46 out of every 1,000 babies die during the first month of life, and consequently this increase of 236 in the number of babies born should during the month have added 11 to the total toll of infant deaths had the death rate during the current year not diminished. That it did diminish is shown by the fact that not only was there no increase in the number of deaths among infants less than one year of age, but an actual decrease, 97, as compared with 128. The conditions that caused this lowered infant mortality operated to bring about a lower death rate in the next age period, too, deaths among children from one to four years of age, inclusive, numbering during the current year but 29, as compared with 41 last year.

But this lowering of the death rate among children was generally offset by increased mortality at the other extreme of life, for deaths among persons sixty years of age and over rose from 302 to 329. Deaths during this age period may always be expected to result largely from the so-called degenerative diseases, which may be postponed, but can hardly be prevented, that is, from apoplexy, hardening of the arteries, diseases of the heart, and chronic inflammations of the kidneys. Such we find was the case in November, for the increase in the number of deaths among persons advanced in years was associated with an increase in the number of deaths from degenerative diseases, from 256 to 293.

Lobar pneumonia is one of the diseases that ordinarily increases in prevalence as winter comes on, and the usual seasonal increase is already manifesting itself. The occurrence of such seasonal variations is the reason why a clear understanding of the significance of morbidity and mortality statistics requires comparisons not only from month to month, but also of corresponding months during different years. Deaths from lobar pneumonia in November, 1921, numbered 24, while in November, 1920, they numbered 43. Either the diminution in the number of deaths, however, was due to the prevalence of the disease in a milder form or else the disease is being better reported by attending physicians, for cases registered during November of the current year numbered 108 as against 92 registered last year.

Diphtheria cases numbered 322, an excess of 129 over the number reported last November, but this increase is apparent rather than real, and is due in no small part to the activities of the Health Department in stimulating the application of the Schick test to determine whether immunity does or does not exist, and the utilization of diphtheria toxin-antitoxin vaccination to confer immunity in those persons found susceptible to the disease. Activities along these lines have brought to light many mild and so-called laboratory cases of diphtheria that otherwise would have escaped observation and record, but corresponding cases would doubtless have been brought to light last year had similar activities been underway. That there has been no substantial increase in the presence of clinical diphtheria is shown by the fact that the number of deaths remains practically the same, 9 in 1921, 10 in 1920.

Unfortunately, so reassuring an explanation cannot be given on the record showing the greater prevalence of certain other contagious diseases. With respect to these diseases fatalities have not kept pace with reported cases, but this is an ordinary occurrence in the early days of increasing prevalence. Comparing November, 1921, with November, 1920, the following changes will be noted, and the

co-operation of the people, and particularly of the medical profession, is urgently desired in order that the further increase in the prevalence of these diseases may be limited so far as is humanly possible.

NOVEMBER.

	Cases.		Deaths.	
	1921.	1920.	1921.	1920.
Cerebrospinal meningitis	10	1	5	1
Diphtheria	322	193	9	10
Measles	202	67	1	2
Scarlet fever	134	97	2	5
Tuberculosis	175	165	67	51

PREVENTION OF DIPHTHERIA—TOXIN-ANTITOXIN IMMUNIZATION.

For some time the Boston Health Department has been endeavoring to devise a feasible plan within its resources of restricting the spread of diphtheria in Boston by means of the toxin-antitoxin method of vaccination against diphtheria, and with this object in view, Medical Inspector John A. Ceconi was sent to New York in June to study the methods and results of the work of Dr. Abraham Zinger and others of the New York Health Department, among the New York school children in order that Boston might be able to profit from New York experience.

GENERAL CONSIDERATIONS AND RECOMMENDATIONS.

Importance of Age in Active Immunization with Toxin-Antitoxin.

Infants Under Six Months.— Under three months: Children mostly immune (maternal). Do not develop an active immunity after toxin-antitoxin. Three to six months: Generally found to be immune (maternal). Toxin-antitoxin may be used, but it is not as effective as when used in the following age group. A negative Schick test cannot be depended on to indicate a permanent immunity.

Pre-school Age.— Six months to two years: Schick test can be omitted in this group, as the proportion of positive reactors is very high. A negative Schick reaction cannot be depended on to indicate a permanent immunity. Strongly advisable to give toxin-antitoxin to all these children. Two to five years: Schick test may be used first. Positive reactions very high. Procedure can be greatly simplified by omitting Schick test and injecting all these children with toxin-antitoxin.

Public School Age.— Five to six years: Incoming classes (kindergarten and 1 A). Schick test may be used first. Positive reactions over 65 per cent. Strongly advisable to inject all these children with toxin-antitoxin. Six to fifteen years:

Schick test and control test should be used first. Many negative pseudo-reactions must be excluded. Toxin-antitoxin for Schick positive and positive combined reactors.

High School Age.— Fifteen to nineteen years: Schick test and control test should be used first. Many negative pseudo-reactions must be excluded. Toxin-antitoxin for Schick positive and positive combined reactors.

Adolescents and Adults.— Nineteen years up: Schick test and control test should be used first. Many negative pseudo-reactions must be excluded. Toxin-antitoxin for Schick positive and positive combined reactors.

NOTE.— The above is Zingher's tabulation.

It is seen from the above that the majority of infants under three months of age are immune to diphtheria. The age of greater susceptibility is from six months to five years, and this is the age in which the most dangerous forms of diphtheria occur.

Inasmuch as the medical inspection of schools in the City of Boston does not come under the jurisdiction of the Boston Health Department, any recommendations that I may make necessarily will be in respect to children of pre-school age, although in my opinion to do this work properly not only the Health Department but also the Medical Department of the schools must necessarily institute this procedure, as the results will not be propitious unless co-ordination between the two departments is possible.

Summary and Recommendations.

Children under six months should not be injected with toxin-antitoxin, as they are generally immune.

All children from six months to five years should be injected with toxin-antitoxin. The Schick test is not of much consequence in this age group, as most of the children give a positive reaction.

No child, however, should be pronounced as being immune from diphtheria until it gives a negative Schick reaction. The Schick test should not be made until at least six months have elapsed after the injections of toxin-antitoxin.

To place the diphtheria preventive work in the public schools on a practicable basis is a matter, in my estimation, wholly and entirely for the medical director of the schools to decide.

In order to inaugurate the system in the regular work of the Health Department I suggest that an intensive campaign be conducted to promote the application of the Schick toxin-antitoxin immunization method.

Selected districts might be chosen for the purpose of promoting the Schick test and active immunization.

Printing and distribution of circulars and placards advocating to parents and physicians the employment of the Schick test and active immunization.

The great possibility offered by the Schick test and the toxin-antitoxin immunization in controlling diphtheria seems to me to be sufficiently important to start an educational campaign in the hope that a formidable disease like diphtheria be obliterated.

Anyone familiar with this work knows well that it is an enormous project and requires men who are trained in the technique of administering both the test and the immunization. Therefore, if in the opinion of the Health Commissioner statistics to date show that the Schick toxin-antitoxin method for the control of diphtheria is worthy of trial, I recommend that this new departure be immediately instituted.

It would seem to me that this work should be under the supervision of the epidemiologist of the Health Department, subject at all times to the wishes and orders of the Health Commissioner.

Effort is being made, so far as the resources of the Boston Health Department will permit, to make toxin-antitoxin vaccination against diphtheria available for persons in Boston desiring its protection in the same manner that vaccination against smallpox is now available. It is necessary to create a better understanding in the community as to the advantages to be derived from the procedure, and a knowledge of its technique and immediate results, and as a step toward that end a conference was held with Dr. William H. Devine, Director of Medical Inspection of Schools, in order that a proper basis of co-operation might be established with public schools.

In the Health Department the matter is still in progress of development. In the meanwhile the department is glad to note that action has been inaugurated in the Boston schools to induce parents to have their school children protected by immunization by their family physicians or by a medical inspector of schools designated for that purpose. Persons not in the public schools desiring to obtain protection can generally do so upon application to their family physicians.

The Massachusetts Homœopathic Hospital, at its own expense and as a matter of public spirit, has established a clinic at 750 Harrison avenue, where on Tuesdays at 2 p. m. children under five years of age can receive the protective treatment.

The Boston City Hospital will through its Department of Immunology, administer the Schick test and toxin-antitoxin immunization free of charge daily, except Sundays, at 10.30 a. m.

NEW ENGLAND CITY AND TOWN MILK COUNCIL.

Following a series of inspections by Health Commissioner William C. Woodward, accompanied by Mr. Willard E. Ward, agent of the Board of Health, Brookline, Mass., of certain creameries supplying Boston and vicinity with milk and cream, several hearings on the subject have been held by the Boston Health Department. These were attended, through invitation from the Health Commissioner, by representatives of health departments of the various cities and towns in Metropolitan Boston, where the products from these creameries might be sold, and by the owners or managers of several creameries where insanitary conditions were found to exist. At these gatherings the undesirable conditions discovered at the creameries were discussed with the owners or managers, with the result that at these creameries improvements have already been made or are in process of completion.

As an outcome of these hearings it was decided that the enforcement of milk laws and regulations in Boston and vicinity could be carried out with greater dispatch and certainty through co-operation

among the health departments in all interested cities and towns, rather than through the action of individual health departments. In consequence of this belief, the New England City and Town Milk Council was formed. It has already held two meetings at the rooms of the Health Commissioner of this city. Membership in the council is confined to representatives of localities receiving milk and cream from sources outside their own jurisdiction. The aim of the council is to improve the quality of the milk and cream sold in cities and towns by co-operating in eliminating undesirable conditions. The management of the organization has been placed in the hands of a Board of Governors, consisting of five members, the present governing board being as follows:

Dr. William C. Woodward, Health Commissioner, Boston, Mass., *Chairman;* Mr. Willard E. Ward, agent, Board of Health, Brookline, Mass.; Mr. Herbert E. Bowman, milk inspector, Somerville, Mass.; Dr. Caleb Fuller, deputy milk inspector, Providence, R. I.; Mr. Fred L. Robertson, milk inspector, Springfield, Mass.

At the last meeting of the council, minimum requirements for processing plants, receiving stations and distributing plants were adopted as follows:

1. Milk shall not be processed in any room or building which is not provided with tight, smooth walls, floors and ceilings, to be of such construction as will allow easy and thorough cleaning.
2. Milk plants shall be free from flies and vermin.
3. Water supply shall be sanitary and sufficient.
4. All sewage and waste products shall be cared for in a sanitary manner.
5. Sufficient and convenient toilets and wash bowls shall be provided for employees.
6. Boilers shall be separated from the processing portion of the plant.
7. Equipment shall be of proper construction and shall be installed in a sanitary manner.
8. Shafting, pulleys, cold water piping, or other obstructions shall not be placed over milk processing equipment.
9. Pasteurization shall be efficient. Pasteurizers shall be equipped with automatic recording temperature devices and charts therefrom shall be preserved and accessible to health officers.
10. Coolers shall be separately inclosed or otherwise protected.
11. Weighing cans, pre-heaters, receiving and holding vats shall be covered.
12. Milk as received from producers shall be clean, and the temperature shall not be above 50 degrees Fahrenheit.

At the same meeting the matter of framing minimum rules for the production of milk at farms was referred to a committee for consideration and report.

SERUM THERAPY FOR LOBAR PNEUMONIA.

Serum and laboratory facilities, whereby physicians can conveniently treat by serum therapy patients suffering from lobar pneumonia, if they desire to do so, are available in Boston without cost. Up to the present time, however, adequate serum therapy has been developed for but one type of lobar pneumonia, namely, that caused by Type I. pneumococcus. Serum therapy for pneumonia due to Types II., III., and IV. is at present more or less experimental. In any case the use of serum for one type of pneumonia in a patient suffering from another type can be expected to yield no benefit whatsoever. It is a procedure that can be justified only when no facilities are at hand for determining the type of the pneumococcus causing the disease and when the condition of the patient demands whatever benefit may be derived from the immediate application of serum, the patient taking the chance that the serum administered may correspond to the type of his disease. In Boston, however, facilities are readily at hand whereby the type of the pneumococcus causing the case may be determined in a very few hours, so that such emergency use of serum will be rarely called for.

A physician desiring to have determined the type of the pneumococcus responsible for any particular case of pneumonia under his care should deliver or send by messenger to the laboratory of the State Department of Public Health, Room 504, State House, a specimen of material freshly coughed up by the patient from his lungs. It is useless to send specimens by mail. It is useless to send stale specimens. It is useless to send specimens made up wholly of saliva and mucus, or specimens contaminated by bacteria foreign to the respiratory tract, such as are ordinarily found in unclean containers. Material from the lungs must constitute a fair part of the specimens submitted.

For the collection of specimens for examination the physician or nurse should provide a sterile container, and the patient if able, should spit directly into the container, and every precaution taken to prevent the contamination of the specimen. The bottle should be immediately and tightly corked, and brought or sent *at once* for examination as directed above.

If a proper specimen has been properly submitted a report may be expected in from three to twelve hours. If the report shows that the disease is the result of the pneumococcus or Type I., then serum for administration can be obtained, if the physician so desires, upon

application to the Boston Health Department between 9 a. m. and 11 p. m., or, except Saturday afternoons, Sundays and holidays, from the laboratory of the Department of Public Health in the State House between 9 a. m. and 5 p. m. Serum for the treatment of pneumonia due to other types of pneumococci are not furnished by official agencies, but may be obtained from commercial sources by physicians desiring to use them.

HEALTH DEPARTMENT UNABLE TO FILL VACANCIES.

For some time past vacancies have existed in the Boston Health Department that should have been filled to enable the department more adequately to discharge its duty of protecting public health, but the salaries of these vacant positions were not sufficient to attract desirable appointees from among competent persons. To fill these vacancies the Health Department is obliged by law to choose its applicants from lists of eligible persons certified by the State Department of Civil Service and Registration after due examination, usually competitive. Of late, however, there appears to have been a dearth of applicants for scientific and professional positions and examination after examination has been held without providing a single qualified person willing to accept an appointment. Frequently a provisional appointment is authorized, which involves no immediate examination but is of a temporary character, but here a difficulty confronts the appointing power in the fact that a trained and qualified person will not leave a permanent position for the uncertain provisional one where the appointment ultimately goes to the winner under a competitive examination. A provisional appointment is, too, an expensive one for the Health Department, since the time and trouble expended in training a provisional employee is commonly wasted, for he almost always leaves the service for one reason or another before that time and trouble have been compensated for.

At the present time these vacancies exist: 1 epidemiologist, at $3,300 a year; 1 deputy commissioner in charge of the Division of Child Hygiene, part time, at $1,500 a year; 1 director, Public Health Education, part time, at $2,000 a year; 1 bacteriologist at $2,000 a year, and several vacancies among the sanitary inspectors where the minimum salary is $1,200 and the maximum salary $2,000 a year. All of these positions are under civil service, and appointees have the protection of the civil service laws.

The Health Department is eager to hear from persons qualified for these positions and will be glad to furnish information concerning terms and conditions of employment.

AMERICAN PUBLIC HEALTH ASSOCIATION CELEBRATES ITS FIFTIETH ANNIVERSARY.

At the semicentennial meeting of the American Public Health Association, held in New York, November 14 to 18, 1921, the Boston Health Department was represented by three delegates, Dr. Frederick J. Bailey, Dr. Philip Castleman and Prof. James O. Jordan.

In addition to its being the celebration of the fiftieth anniversary of the organization of the American Public Health Association, the occasion was designated also as a "jubilee meeting" in honor of its first president, Dr. Stephen Smith, now in his ninty-ninth year and still active in the association. The meeting was unusually well attended by representatives from practically every state in the Union and from Canada, Mexico and Cuba.

The number of scientific papers presented was large, and they were of interest and importance to the delegates, as they dealt with advanced work in public health. One of the most important was on the practical application of the Schick test for the determination of susceptibility to diphtheria and the application of toxin-antitoxin for the immunization of susceptible cases. These procedures were recognized as of firmly established value and as marking a distinct advance toward the prevention of diphtheria. It is hoped by the general adoption of this method diphtheria may become as rare as smallpox.

Meetings of the International Dairy and Milk Inspectors' Association and of the American Child Hygiene Association were held simultaneously and were attended by many of the delegates interested in the activities represented by those organizations.

ACTIVITIES OF THE BLOSSOM STREET HEALTH UNIT.

The Blossom Street Health Unit has been completely renovated during the past summer and is now in a condition to house comfortably the health workers operating from it. A boiler has been installed of adequate size to warm the Unit. A new coat of paint has been applied throughout. A new lighting system has been installed, including connections for the use of a stereopticon or moving picture apparatus. Other improvements have been made of less importance, but all contributing toward the comfortable occupancy and use of the building.

On September 1, 1921, the Health Department took over the baby clinic formerly operated by the Baby Hygiene Association, providing two nurses for that purpose. The medical service is still provided,

nowever, by the Baby Hygiene Association and the service is integrated with the work of that organization.

The recently organized baby conferences have been well attended, and have attracted many new mothers, health students and other visitors.

The nutrition service in the West End district, formerly provided by the Jewish Federated Charities, has been reorganized through co-ordination of the work of that organization, the Baby Hygiene Association, and the Boston Health Department. The field service has been enlarged to include the pre-school undernourished child, and the nutrition conference held in the Health Unit has been improved.

At the regular monthly conference of the West End workers, held in the Health Unit in November, a much appreciated opportunity was provided the workers present to hear and discuss the reports of the director of the Health Unit and of the staff nurse who attended the American Child Hygiene Association Convention held in New Haven.

IMPROVEMENT IN THE CONDITION OF FOOD.

One of the acid tests for public service departments, though not necessarily infallible, is the effort to see that there is no feeling of dissatisfaction engendered in the public mind. It is so natural for people to make complaint at once to authorities whose duties are well-known that it was a real and pleasing tribute to the present day market status when the week of Thanksgiving passed without a single complaint on poultry to the Food Inspection Division. Not a little credit for this situation may be laid to the untiring efforts of the food inspectors, who worked far into the night on the day before the holiday. During the week about thirteen hundred pounds of poultry were seized and condemned as unwholesome.

It is no new discovery that the grumbler converted may become the enthusiast. Time after time is this shown when the standards of some trade are forced to a higher level, against the outcries of some skeptical and interested dealers. Those who cry out loudest against what they style uncalled for innovations — and to some even cleanliness is an innovation — at last come up with a smile and a complete acknowledgment of actual benefit to themselves. Oftentimes this is the only consolation of the health official who has a difficult assignment.

Score another achievement for the Health Department. Acting in harmony with the officials of the states on the Pacific Coast, to whom no small credit is due, we are able to report the past season has

shown the finest, cleanest fruit that has ever been shipped to Boston. A startling item in this connection is that there were no condemnations of pears, despite the huge shipments that come from the coast each month. According to reports from the West, even the packers themselves have got into the spirit of our endeavor and have made sincere and successful efforts to meet Boston standards.

CONTEMPLATED REORGANIZATION OF SANITARY INSPECTORS' DISTRICTS.

Proposed plans for the reorganization of the sanitary inspection districts into which Boston is now divided, if carried into effect, will mean the saving of considerable time, money on the part of the city, and effort on the part of the inspectors, and a greater degree of service to the public. This plan is to be tried out, whether or not provision is made for an increase in the inspection force, upon the assumption that there will be provided during the coming year a new rating of supervising inspector, to be selected from a civil service list of eligibles to be established.

The present system calls for the assignment of an inspector to a certain "district" within the city limits and holds him responsible for the condition of that district under the direction of the deputy commissioner in charge of the Sanitary Division. Inspectors report each morning at nine o'clock at the Health Department offices in the City Hall Annex, and receive their assignments for the day. The inspectors then go from the City Hall Annex to their respective districts, some of which are so remote that the greater part of an hour is lost in travel. Conferences between the public and the inspectors when necessary have to be arranged for in the City Hall Annex, and in the early morning hours the present quarters of the sanitary inspection division are too small to permit more crowding, such as must occur when outside persons meet the inspectors in the office on official business.

The proposed system divides the city into five districts and assigns to each district a supervising inspector with a staff of ten inspectors and a police officer. The supervising inspector will have headquarters in some convenient location in that district, and the inspectors assigned to his direction will report to him at the local headquarters, receive their instructions from him, and be for all practical purposes members of a separate unit of the sanitary inspection division. This plan will enable an inspector to report, perhaps only a few minutes' walk from his home, directly to his supervisor, receive his assignments and special orders, and be in his district in a much shorter space of time than is possible under the present arrange-

ment. The size of the group of inspectors under each supervising insgector will be so small, relatively, as compared with the entire group as now arranged, that the supervising inspector will be able to keep in close personal touch with the work and the inspectors individually, and thus be able to correct any false ideas as to the supervision of his district and to advise each inspector individually with respect to any matters that may come up needing attention.

In spite of the fact that the deputy commissioner in charge of the sanitary division does his utmost now to keep in close personal touch with the work of his thirty-six or more inspectors, it is a physical impossibility to give to each individual inspector the attention and thought that the proper conduct of the sanitary conditions met with in the several sections of the city demand. Under the proposed plan, the deputy commissioner in charge of the sanitary division will have regular conferences with his several supervising inspectors, go over with them what they have gone over with the group of inspectors in their particular districts, and thus indirectly keep in almost personal touch with every individual inspector in the force.

The saving of time, now lost because of the travel of inspectors from their homes to the office in City Hall Annex and then to their respective districts, will be considerable, and should manifest itself in attention to conditions now overlooked because of lack of available time. Aside from the saving of time there will be a considerable saving of money to the City of Boston. The inspectors now are reimbursed for carfares expended in traveling from the office in City Hall Annex to their respective districts. It is expected that this item of expense will be largely reduced if not altogether eliminated. Thirty-six or more inspectors coming into the Health Department offices each morning and then going to their several districts costs the city, for example, at least ten cents each for carfare, which amounts yearly to over one thousand dollars; and this item is merely indicative of the amount which it is expected to be saved. The next annual report will show the results obtained.

ANNUAL MEETING OF THE AMERICAN CHILD HYGIENE ASSOCIATION, NEW HAVEN, CONN.

Officially representing the Health Department, Miss Elizabeth A. Phillips, R. N., and Miss Helen A. Donahue, R. N., for the Health Department staff, attended the annual meeting of the American Child Hygiene Association, held on November 1 to 5, inclusive, 1921, at New Haven, Conn. Mrs. Clara Belle Bligh, director of the Blossom Street Health Unit, also represented the Health Department at this meeting.

The first assembly was at the Sprague Memorial Hall, after a visit to the New Haven Hospital Dispensary, where very interesting and constructive work on child hygiene is being accomplished. Dr. Haven Emerson was the principal speaker at the general session at Sprague Memorial Hall, which was presided over by Dr. Courtenay Dinwiddie of Washington, D. C. Doctor Emerson discussed the ideals of co-ordination with respect to the activities of private and public health functions, pointing out the lack of such service generally throughout the United States and the existence of one such service, ably conducted, in New York City. Local, state and national and general co-ordination principles were discussed by several well-informed speakers, after which followed a general discussion from the floor, the main impression being that a central representative body with a spirit of generosity, unselfishness and singleness of purpose is indispensable.

The following day, Thursday, November 3, 1921, the general session was continued, with Dr. H. L. K. Shaw presiding. His address consisted of an historical review of the accomplishments of the American Child Hygiene Association since 1909, as the result of organized effort, manifesting itself in reduced infant mortality while not losing sight of the health welfare of older children. The same subject covering a briefer period was set forth in an address by Doctor Bolt, general director of the association, who reported upon progress in child hygiene work during the past year. He pointed out that though there has been a reactionary tendency along many lines, the interest in child hygiene work has grown, especially with respect to pre-natal work in many sections of the country, and with respect to pre-school activities, and dental and nutrition work, and this in spite of the fact that appropriations in many instances have been cut down, the work being carried out at great personal sacrifice. After a roll call of affiliated socities, which was responded to merely by a recognition of the designated name by the representative in attendance, Miss Julia Wade Abbott of Washington, D. C., discussed the establishment of health habits in the kindergarten, and laid special stress on mental and physical test records, environment, air, light, cleanliness, and the atmosphere of joy and happiness, besides the emphasis of health habits in play. During the afternoon several papers were read by representatives from the State of Washington, San Francisco, and Chicago, after which a public meeting was held in the evening and addressed by President Angell of Yale College. He emphasized the fact that the study of any issue leads finally back to education, and that in the health of the nation this was a dominating factor. Later in the evening Miss Grace Abbott discussed the various aspects of child life in industry, and the out-

look of children in industry towards those in organizations engaged in child welfare work.

At the meeting held on Friday, November 4, at which Dr. William P. Lucas of California presided, Dr. C. M. Campbell of Boston spoke of the psychology of the pre-school child, emphasizing the influence of the mother over the child, and the need for such directing influence on the child during the pre-school period. Important addresses were also given by Dr. Roger I. Lee of Cambridge on the value of lay co-operation in health work, on administrative problems of lay directors of private organizations by Homer Folks of New York City, and on financial and publicity problems by Dr. John S. Ellsworth.

The final meeting was held Saturday, November 5, and was presided over by Miss Sara B. Place of Chicago. The work of the Baby Hygiene Association of Boston was discussed from the floor. Miss Dillon of West Virginia spoke on the rural districts in comparison with the better equipped city districts, after which there was general discussion on social service and nursing.

The representatives of the Boston Health Department came home with broadened ideas and fresh inspiration for their work and hope to demonstrate that the money spent by the City of Boston for their attendance has been so productive of results as to warrant sending them or other representatives to similar meetings in the future.

DEATHS AND DEATH RATES FOR CERTAIN NEW ENGLAND CITIES, NOVEMBER, 1921.*

City.	Population Estimated July 1, 1921.	Deaths During Week Ending				Death Rates During Week Ending			
		Nov. 26.	Nov. 19.	Nov. 12.	Nov. 5.	Nov. 26.	Nov. 19.	Nov. 12.	Nov. 5.
Boston	757,634	212	203	182	176	14.6	14.0	12.5	12.1
Bridgeport	149,967	28	28	18	30	9.7	9.7	6.3	10.4
Cambridge	110,444	29	21	27	31	13.7	9.9	12.7	14.6
Fall River	120,668	†27	†39	†31	†28	11.7	16.9	13.4	12.1
Lowell	113,757	25	23	25	28	11.5	10.5	11.5	12.8
New Bedford	125,012	22	29	27	25	9.2	12.1	11.3	10.4
Providence	239,645	56	63	44	66	12.2	13.7	9.6	14.4
Springfield	135,877	22	25	19	21	8.4	9.6	7.3	8.1
Worcester	184,972	47	52	29	41	13.2	14.7	8.2	11.6

*Published by the weekly Health Index of the United States Bureau of the Census.

† Deaths for weeks ending November 4, 11, 18 and 25.

SUMMARY OF THE WORK, NOVEMBER, 1921.

BUREAU OF ADMINISTRATION.

	Nov.	Oct.
Conferences	3	5
Hearings	3	3
Prosecutions ordered	134	128
Orders	3	9
Special drafts	2	1
Bids accepted	4	13

	Nov.	Oct.
Personnel:		
Appointments	1	1
Appointments terminated	1	1
Appointments made permanent	5	1
Leaves of absence granted	4	6

LICENSES, PERMITS, ETC., ISSUED.

	Nov.	Oct.
Burial permits	940	916
Disinterment permits	23	47
Undertaker's license	0	1
Milk licenses	119	218
Pedlers' licenses, general	34	53
Hen licenses, granted	54	71
Grease, bones, etc., licenses	0	2
Dump licenses	5	1
Manure license	1	0
Offensive trade application rejected	0	1
Undertaker's appointment	0	1
Culture station approved,	0	1

	Nov.	Oct.
Bakery ordered reopened,	0	1
Bakeries ordered closed	1	2
Provisional stable licenses granted	3	0
Compulsory removals to hospital	2	0
Stable permit granted	1	0
Stable permit refused	0	1
Denatured alcohol licenses,	8	0
Manicure-massage:		
Granted	32	36
Rejected	1	0
Revoked	1	0
Lying-in hospitals certified	2	5

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Nov.	Oct.
Visits by medical inspectors	1,272	1,087
Deaths investigated	19	10
Vaccinations	15	42

	Nov.	Oct.
Vaccination certificates	15	55
Cases brought to Boston for treatment	64	53
Antitoxin administered	15	11

NURSING SERVICE.

	Nov.	Oct.
Communicable disease visits	2,273	1,487
Babies visited, first visit	1,013	1,289
Revisits	1,688	2,935

HEALTH UNIT (Blossom Street).

	Nov.	Oct.
Health Department proper:		
Vaccinations	15	42
Vaccination certificates issued	13	66
Cases visited by nurses:		
Communicable diseases	145	124
Babies	46	178
Complaints made of insanitary conditions	9	12
Total	228	314

	Nov.	Oct.
Baby Hygiene Association:		
Babies cared for	288	407
Babies newly admitted,	22	19
Babies readmitted	4	1

	Nov.	Oct.
Conferences:		
Number	8	6
Total attendance	288	323
Home visits by nurses,	397	329

	Nov.	Oct.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	62	27
Consumptives' Hospital Department:		
Calls by nurses in districts	786	572
Instructive District Nursing Association:		
Visits by nurses	1,487	1,728
Jewish Welfare Center:		
Conferences held	4	3
Number of children attending conferences	0	46
Total	152	46
Visitors:		
City	20	15
Out of city	3	2
General:		
Number persons applying for information	38	38

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Nov.	Oct.
New reports	393	500
Stores inspected	1,837	2,085
Sanitary defects remedied	214	201
Complaints at office	37	48
Referred to Sanitary Division	29	44
Milk applications approved	155	132
Pedlers:		
Applications for licenses approved	32	57
Vehicles inspected and approved	761	753
Court cases	109	55
Fines	$545	$2,345

CONDEMNATIONS.

By Request.

Cheese	26 pounds	Poultry	125 pounds
Ducks	123 pounds	Squash	30,100 pounds
Halibut	40 pounds	Turkey	80½ pounds

Without Request.

Beef	35 pounds	Filberts	85 pounds
Bones, etc.	1,300 pounds	Herring	300 pounds
Candy	1,000 pounds	Ketchup	14 bottles
Canned goods	17,493 cans	Peanut butter	1,800 pounds
Chestnuts	93 pounds	Pickles	1,716 bottles
Chickens	12 pounds	Popcorn	775 pounds
Cereal	900 pounds	Poultry	309 pounds
Cocoa	22 cans	Sausages	80 pounds
Cocoanuts	100	Sugar	21 pounds
Corned beef	121 pounds	Turkey	831¾ pounds
Ducks	25½ pounds	Veal	13 pounds
Eggs	44 cases	Walnuts	65 pounds
Eggs	339 dozen		

Samples submitted to Chemical Laboratory for analysis:

Apple crush	1	Lemon pie filling	1
Cabbages	2	Lemon extract	1
Eggs	3	Powered milk	1
Frankfurts	1		

LIVE STOCK INSPECTION (Brighton Abattoir).

	Nov.	Oct.		Nov.	Oct.
Cattle inspected	227	145	Sheep inspected	1	2
Calves inspected	732	396	Parts condemned	604	626
Swine inspected	6,231	6,270	Animals condemned	6	8

DAIRY DIVISION.

	Nov.	Oct.		Nov.	Oct.
Dairies inspected	311	243	With milk rooms	139	158
Scoring above 50*	173	190	Without milk rooms	172	85
Scoring below 50	138	53	Inactive	10	4

* Passable mark.

BUREAU OF MILK INSPECTION.

	Nov.	Oct.		Nov.	Oct.
Chemical Inspection of:			Bacteriological examinations of:		
Milk	1,303	1,220	Milk	680	595
Ice cream	0	7	Ice cream	22	96
Vinegar	56	0	Court cases	10	31
Miscellaneous	13	1	Fines	$195	$375

SANITARY INSPECTION.

	Nov.	Oct.		Nov.	Oct.
Original inspections	1,302	1,046	Car reports	1,269	1,059
New reports	1,871	1,620	Complaints	816	731
Reinspections	6,065	4,537	Court cases	95	97
Legal notices served	437	335	Fines	$81	$90

HOUSING SERVICE.

	Nov.	Oct.		Nov.	Oct.
Interior rooms lighted and ventilated	17	25	Water-closets: Newly installed	8	10
Water-closets: Interior lighted and ventilated	75	49	Old buildings removed	3	5
			Yards paved and drained,	8	2

BACTERIOLOGICAL LABORATORY.

	Nov.	Oct.
Examinations for diagnosis and release:		
Diphtheria	1,861	1,073
Tuberculosis	249	264
Typhoid	33	63
Gonorrhea	565	630
Gonorrheal ophthalmia	43	38
Syphilis	1,018	995
Other examinations	17*	36
Bacteriological examinations of milk	675	595
Examination of rats	1,401	1,256

* Dark field examinations, 4; genito-urinary, T. B., 1; malaria, 5; material alleged to be of animal nature, 1; cocoa for worms, 3; culture virulence, 3.

VITAL STATISTICS, NOVEMBER, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING NOVEMBER, 1921, WITH COMPARATIVE FIGURES FOR NOVEMBER, 1920.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	829	832	—3	13.13	13.29	—.16
Nonresidents deducted	697	689	+8	11.04	11.01	—.03
By Age:						
Under one year	97	128	—31	1.54	2.04	—.50
One year to four years, inclusive	29	41	—12	.46	.65	—.19
Sixty years and over	329	302	+27	5.21	4.82	+.39
By Special Causes:						
Degenerate Diseases, So Called:						
Apoplexy	61	52	+9	.97	.83	+.14
Arteriosclerosis	38	32	+6	.60	.51	+.09
Heart disease	153	117	+36	2.42	1.87	+.55
Nephritis, chronic	41	55	—14	.65	.88	—.23
Infant and Maternal Mortality:						
a. Total registered live births	1,566	1,330	+236	24.80	22.84	+1.96
b. Registered stillbirths	52	49	+3	.82	.78	+.04
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	32.14	33.13	—.99
c. Deaths of mothers from causes incident to childbirth	9	17	—8	.14	.27	—.13
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	5.56	11.49	—5.93
Deaths of children in first year of life	97	128	—31	1.54	2.04	—.50
Deaths in first year per 1,000 live births	.....	.....	.....	61.94	89.51	—27.57
Violence:						
Accidents	40	46	—6	.63	.73	—.10
Homicides	.....	2	—2	.....	.03	—.03
Suicides	9	5	+4	.14	.08	+.06
Miscellaneous:						
Alcoholism, acute or chronic	13	7	+6	.21	.11	+10
Bronchopneumonia	30	39	—9	.47	.62	—.15
Cancer	83	89	—6	1.31	1.42	—.11
Cirrhosis of the liver	3	4	—1	.05	.06	—.01
Diabetes mellitus	6	10	—4	.10	.16	—.06
Diarrhœal diseases, children under two years of age	11	20	—9	.17	.32	—.15

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	2	12	—10	.03	.19	—.16
Deaths.	1	1	.....	.016	.016	.....
Cerebrospinal meningitis.....Cases..	10	1	+9	.16	.016	+ 14
Deaths.	5	1	+4	.08	.016	+.06
Diphtheria.....Cases..	322	193	+129	5.10	3.09	+2.01
Deaths.	9	10	—1	.14	.16	—.02
Influenza.....Cases..	7	14	—7	.11	.22	—.11
Deaths.	2	1	+1	.03	.016	+.01
Measles.....Cases..	202	67	+135	3.20	1.07	+2.13
Deaths.	1	2	—1	.016	.03	—.016
Pneumonia (lobar).....Cases..	108	92	+16	1.71	1.47	+.24
Deaths.	24	43	—19	.38	.68	—.30
Scarlet fever.....Cases..	134	97	+37	2.12	1.55	+.57
Deaths.	2	5	—3	.03	.08	—.05
Tuberculosis (pulmonary).....Cases..	175	165	+10	2.77	2.64	+.13
Deaths.	67	51	+16	1.06	.80	+.26
Tuberculosis (other forms).....Cases..	14	35	—21	.22	.50	—.28
Deaths.	9	12	—3	.14	.19	—.05
Typhoid fever.....Cases..	12	11	+1	.19	.17	+.02
Deaths.	1	2	—1	.016	.03	—.01
Whooping cough.....Cases..	19	75	—56	.31	1.20	—.89
Deaths.	1	.....	+1	.016	.....	+.016

This table includes all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1921 (mid-year), based upon the federal census of 1920, has been used.

Accuracy and Completeness of Death Certificates.—To insure accuracy and completeness of death certificates, the laws of Massachusetts require the superintendent or other person in charge of a hospital, public or private, to obtain and record at the time of admission of each inmate all the facts that will be required for record in the event of the death of such persons. The making of such a record in every case relieves the procedure of the gruesomeness that might attach were a record made only in those cases where a fatal termination was anticipated.

HEALTH DEPARTMENT.

(Tel. Fort Hill 5100—Main 3887.*)

Commissioner of Health	1109 City Hall Annex.
Secretary	1108 City Hall Annex.
Medical Division	1110–11 City Hall Annex
Health Unit	17 Blossom street.
Detention Hospital	Southampton street.
Bacteriological Laboratory	1101 City Hall Annex.
Food Inspection Division	1001A City Hall Annex.
Inspection of Foodstuffs	1001A City Hall Annex.
Examination of Milk and Vinegar	1104 City Hall Annex.
Inspection of Dairies	1001G City Hall Annex.
Brighton Abattoir	Market street, Brighton.
Public Health Education	1108 City Hall Annex.
Sanitary Inspection Division	1001C City Hall Annex.
Abatement of Nuisances	1001B City Hall Annex.
Housing Service	1001C City Hall Annex.
Examination of Gas Fitters	1001C City Hall Annex.
Vital Statistics Records and Accounts Division	1112 City Hall Annex.
Permits for Burial	110 City Hall Annex.
Superintendent of Peddlers	27 North Grove street.

* This number available for burial permits and for other business after regular business hours.

Office Hours.—General offices on the eleventh floor of the City Hall Annex, 9 a. m. to 5 p. m., excepting on Saturday afternoons, Sundays and holidays, for the transaction of business not specified below.

Room 110, City Hall Annex, first floor, open from 9 a. m. to 10 p. m., and Sundays and holidays from 10 a. m. to 10 p. m., for the reporting of cases of communicable diseases, the issuing of burial permits, the receiving of cultures and widals, and the receiving of complaints.

The distribution of vaccines and antitoxins will be from the laboratory between the hours of 9 a. m. and 6 p. m., excepting Saturday afternoons, Sundays and holidays.

Wassermann Tests, Etc.—The bacteriological laboratory is prepared to examine free of expense blood specimens by the Wassermann test for syphilis. Tests are made each Tuesday, Wednesday, Thursday and Friday Blood is drawn from patients in the laboratory each Monday, Tuesday, Wednesday and Thursday from 2 to 4 p. m.

Dark Field Illumination.—The bacteriological laboratory is prepared to examine free of expense at the request of physicians lesions suspected of being syphilitic, by dark field illumination. Tests are made every afternoon between 2 and 4 p. m., except Saturdays, Sundays and holidays.

STATISTICS FOR 1920.

Population 751,251

Live Births	19,494	Birth rate (live births)	25.94
Deaths	11,601	Death rate	15.44

The deaths and death rate stated above cover all deaths occurring in Boston, of nonresidents as well as of residents.

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Rec'd FEB 13 1922 B. P. L.

MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

WILLIAM C. WOODWARD, M. D., *Health Commissioner.*

All communications relating to this publication should be addressed to the HEALTH COMMISSIONER, BOSTON, MASS.

VOL. 10. BOSTON, DECEMBER, 1921. NO. 6

PUBLIC HEALTH AND THE OPERATIONS OF THE HEALTH DEPARTMENT DURING THE CALENDAR YEAR 1921.

This bulletin marks the close of the calendar year 1921. It seems appropriate, therefore, that a brief statement be made concerning the state of the public health in Boston during the year just ended, and the operations of the Health Department during that period.

Deaths among the total population, residents and nonresidents, numbered 10,217, and the general death rate was 13.48 per thousand, the lowest death record in the history of Boston. What such figures mean in lives saved — or at least in deaths postponed — can be best seen by considering the number of deaths that would have occurred in 1921 had the death rate during that year continued as high as during stated earlier periods. Had the death rate for 1921 been as high as it was in 1920, deaths would have numbered 11,699, or 1,482 in excess of the number that did occur. Had the death rate continued as it was in 1911, 12,941 deaths would have occurred, an excess of 2,724. And had the death rate continued as it was at the beginning of the current century, in 1901, there would have been 15,054 deaths representing a saving of 4,837 lives.

Among the resident population alone 8,401 deaths occurred, the death rate being 11.09.

The most striking feature of the mortality tables is the diminished death rate among children under five years of age; only 2,079 deaths occurred in 1921, whereas 2,773 occurred in 1920. Among children in the first year of life, 1,495 deaths occurred, equivalent to 77.22 per thousand live births. Many features contributed toward the decreased mortality in these groups, but one cause worthy of special note is the diminution in deaths among children under two years of age from diarrheal diseases, from 361 in 1920 to 208 in 1921.

The decline in general mortality was the result of individual variations in the mortality from various diseases, some operating to increase the death rate, others to diminish it. Diseases affecting the respiratory tract showed a strong downward movement. Comparing 1920 with 1921, deaths from tuberculosis fell from 956 to 877; deaths from lobar pneumonia, from 672 to 457; deaths from bronchopneumonia, from 689 to 426; from influenza, from 479 to 22. Deaths from violence fell from 648 in 1920 to 639 in 1921. But an upward movement appeared in cancer, from 968 to 1,055; in appendicitis, from 116 to 155, and from alcoholism, from 31 to 69.

A general synopsis of the vital statistics for Boston in 1921, with corresponding data for the preceding year, appears on pages 133 and 134.

No serious outbreak of communicable disease occurred during the year. Usual activities looking toward the prevention of such diseases continued, but with increased effectiveness. The circulars and leaflets used by the Health Department in its operations against communicable diseases have very generally been brought up to date and rewritten, and an effort has been made to revise the report and record system in the medical division so as to encourage thoroughness and accuracy in work and to facilitate direction and supervision and statistical study and control.

Plague has menaced the eastern seacoast throughout the year, because of its presence in Europe, South America and some of the islands of the Atlantic. To limit the danger of its introduction and spread through the port of Boston, the Health Department has had substantially to increase its rat control work. A regular force of trappers has been maintained, and the rats caught have been systematically examined. The patrol of the waterfront, established last year, has been continued, to procure compliance with federal and local requirements looking toward the prevention of the escape of rats from vessels to the shore and to abate rat feeding and rat breeding places within the danger zone. In connection with the regular sanitary and food inspection service throughout the city, rats have been regarded as a nuisance dangerous to health, and wherever their presence has been manifest action has been taken to abate the nuisance. Realizing, however, that rat control work in Boston alone would not afford adequate protection to New England or to the country generally, and that Boston itself needed protection from the introduction of plague not only directly from abroad but also indirectly, through neighboring cities and towns and other seaports in New England, the Health Department actively co-operated with the Massachusetts Department of Public Health in an effort made by that department, unfortunately only partly successful, to obtain

an appropriation to stimulate such work generally throughout the state. On the initiative of the Boston Health Department, too, the Boston Chamber of Commerce called a conference to consider plague prevention, at which representatives were present from the United States Public Health Service, from the Massachusetts Department of Public Health and corresponding departments of other New England states, from many New England cities and towns, and from various civic bodies. As a result of the conference last mentioned, a committee was appointed to inquire into the entire situation and to make appropriate recommendations.

The examination of trapped rats in connection with the plague preventive work of the Health Department has added considerably to the burden of the bacteriological laboratory. Enlarged operations in this field were begun in February, in connection with the Massachusetts Department of Public Health; but since that time, because of the failure of the state appropriation, they have been carried on by the Boston Health Department alone. The total number of rats examined up to the end of the year was 6,177, and at the close of the year examinations were being made at the rate of 300 a week. Examinations up to the present time have proved negative. In order to facilitate the examinations of rats, no matter how extensive the need for such work may become, and to remove it from the laboratory in the City Hall Annex, work has been begun toward the establishment of a rat laboratory in the upper stories of the garage, at 20 North Grove street. A heating plant has already been installed, and arrangements made for the accommodation on the ground floor of the men employed in and about the garage and occupying the upper stories, so that the upper floors are now available for remodeling for the purposes of a laboratory.

During the year the public mind reached almost a state of panic at one time for fear of typhus fever, because of charges of inefficiency of the federal quarantine service brought by the health authorities of one of the Atlantic seaports, and because of the diverting to the port of Boston of many thousands of immigrants from typhus-infected places who could not find entrance through that seaport. Facilities were installed for the delousing at the Detention Hospital of such persons as might have to be deloused should any case of typhus be found in Boston, and experts were employed by the Boston Health Department to facilitate diagnosis, but throughout the season of alarm no case was discovered. In December, however, a patient suffering from typhus fever, a resident of Maine, was found in one of the local hospitals, having presumably contracted the disease in the course of a journey to and from Florida, but the circumstances were such as hardly to cause comment and certainly to cause no panic.

The utter inadequacy of the federal quarantine station on Gallop's Island to serve the port of Boston in event of the influx of any considerable number of immigrants, and its inadequacy in some respects to serve even present current needs, were brought forcibly to light in connection with the typhus situation. On that account, and with a view to the effective co-ordination of the activities of federal, state and city health authorities along the Atlantic seacoast, the Boston Health Department took the initiative in the calling of a conference of all such authorities. The conference was called in Washington by the Surgeon General of the United States Public Health Service, in February, 1921, and was of definite benefit in bringing about a better understanding of the entire situation not only by the health authorities but by the public generally. The most concrete result of the conference, however, was the making of considerable appropriations for the enlargement and improvement of certain federal quarantine stations, including an appropriation of $150,000 for the Boston station.

Much time and thought and some money have been spent during the year in an effort to find some way in which to provide adequate isolating facilities at the Detention Hospital on Southampton street. The hospital itself is a disgrace to the City of Boston, and the maintenance of such isolating facilities as it affords is but little short of a crime. Notwithstanding that the hospital must certainly within a comparatively short time be replaced by a modern building, it was thought advisable to reconstruct the quarters used for the detention, pending diagnosis, of patients suffering from diseases of uncertain nature but strongly resembling quarantinable diseases, of patients suffering from leprosy, and of patients suffering from communicable diseases generally, when other hospitals cannot accommodate them. Plans were drawn, but it was found that available money would not permit the work to be done during 1921. If the necessary appropriation can be obtained, it is purposed to make the needed temporary improvements during the coming year. This will not, however, do away with the need for a new building, preferably on another site, and arrangements to that end should certainly be made without delay.

One of the most distinct advances in the health activities of the Health Department during the year has been the reorganization of the Health Unit on Blossom street and the rehabilitation of the building in which it is housed. Through the generosity of the Metropolitan Chapter, American Red Cross, it was made possible to provide an experienced director for the work of the Unit and much of its increased efficiency has resulted from that fact. There is a much better spirit of co-operation among the workers representing

the several agencies operating from the Unit and serving the North and West Ends than ever before, resulting in part from the monthly conferences that have been established; and through the organization of a local committee of residents in the neighborhood to co-operate with the Health Department in the conduct of the Unit, it is being made to serve the people in a way never before possible. A new heating plant has been installed, the interior has been painted throughout, and partitions, plumbing and lighting have been arranged so as to provide convenient accommodations on the first floor for all of the activities of the Unit. The Health Department now provides nurses from the baby hygiene conferences held at the Unit, instead of depending upon the Baby Hygiene Association for such service, thus co-ordinating such work better with the activities of the Department in that field. On the whole, the Health Unit has been started well on the way toward serving the people in the North and West Ends in a substantial and helpful way, and what it accomplishes in the next year, if it be adequately supported, should go far toward determining the advisability or inadvisability of providing similar stations in other parts of the city.

An increasing recognition of the value of the service rendered by the bacteriological laboratory has been shown during the year by the use of it by a larger number of physicians. Fifty physicians availed themselves of it during the part year who had not done so during the year preceding, and approximately 90 per cent of the physicians of Boston used the laboratory during the past year in connection with their professional work. By reason of this fact and because of increasing recourse to the laboratory by physicians already accustomed to use it, the routine examinations in the laboratory increased from 45,729 to 51,955.

An exhaustive study of the pasteurizing plants in and about Boston, upon which the city depends very largely for the safety of its milk supply, is about complete and should result in a more efficient control of pasteurization than has been heretofore possible. An examination is under way to determine the effectiveness with which milk bottles are washed and sterilized in milk distributing plants and the cleanliness with which milk caps are handled in the course of bottling. The very fact of such an examination being carried on has resulted in improved conditions. The systematic examination of the swimming pools in Boston, public and private, begun last year, has been continued in so far as the available working force in the laboratory has permitted. Its necessary interruption from time to time because of inadequate laboratory force has shown that however willing those who are responsible for the sanitary management of those pools may be, yet as soon as official supervision

ceases their interest slackens, and has demonstrated the necessity for such supervision if the patrons of the pools are to be protected.

The investigation initiated by the Health Commissioner in December, 1919, to determine the extent and causes of variations in the results reported by different bacteriological laboratories when examining the same or similar specimens is rapidly nearing completion. Through the courtesy of the late Prof. William T. Sedgwick, of the Massachusetts Institute of Technology, who undertook to supervise the work and to furnish much of the expert service, and more lately of his successor, Prof. Samuel C. Prescott, and through the courtesy of the Committee of the Permanent Charity Fund, Incorporated, who undertook to provide the money necessary to carry on the work, it has been found possible to obtain the sympathy, co-operation and support of from six to nine laboratories carrying on bacteriological work in and about metropolitan Boston, and by their joint effort it is expected to establish uniformity of such results. If it be found practicable, as it is hoped, to arrange for some effective system of continuing comparison and checking up of results, everything possible will have been done that seems humanly possible toward eliminating the uncertainty of the human factor. The importance of standardizing such work and of maintaining it at the highest possible standard of efficiency is best realized when one considers how disastrous may be the results of an erroneous laboratory report with respect to such diseases as diphtheria and tuberculosis, and above all with respect to syphilis and gonorrhea.

To see that serums and other more or less perishable biologic agents used by physicians for diagnostic, preventive and curative purposes are kept in such a way as to prevent unnecessary deterioration and to insure their potency when sold, the Health Department has established a system of inspection over such stores as carry such biologic products in stock, making sure that they are kept out of the light and in clean, cool, dry places.

Important improvements have been made during the year in the operating equipment of the bacteriological laboratory. Most important, perhaps, has been the establishing of a system whereby the laboratory now distributes and collects the outfits furnished by it for the use of physicians in connection with the work of the laboratory. Formerly druggists maintaining stations for the distribution and deposit of such outfits had to send to the laboratory in the City Hall Annex to obtain and to deliver them; now they merely telephone their needs and a motor vehicle from the laboratory delivers the necessary supplies and collects such as may have been deposited for examination. In the laboratory itself an old-fashioned ice-cooled refrigerator has been replaced by a thoroughly modern,

mechanical refrigerating plant. A new autoclave has been provided, and worn-out microscopes have been replaced by new ones. Incidentally, the general condition of the laboratory is much better than ever before, because of the present availability of a cleaner who devotes her entire time to the bacteriological laboratory, replacing the casual service of a charwoman having no special fitness for laboratory work.

The year 1921 was the busiest and possibly the most productive of results in the history of the Food Inspection Division. Its usual activities looking toward the condemnation of unsound or unwholesome foodstuffs have been continued, and its work and responsibilities have been largely increased by the growth of the movement for better sanitation in the preparation, storage and distribution of foodstuffs. In the latter field the responsibilities and work of the Health Department have been very substantially increased by the enactment of "An Act to Regulate Bakeries and Bakery Products," chapter 418 of the Acts of 1920, and "An Act Regulating the Manufacture or Bottling of Certain Non-Alcoholic Beverages," chapter 303, Acts of 1921, and by the regulations made by virtue of these acts. Fortunately, through the provision that was made in the budget for 1921–22 for additional food inspectors, the Department has been able to keep abreast of its growing responsibilities, although there is still abundant opportunity for increased activities.

Condemnations of foodstuffs were perhaps larger during the past year than ever before, possibly because of a movement to unload upon the public foodstuffs of various kinds that had been accumulated during the war and held for exorbitant prices, the owners of which, having abandoned hope, sought to unload it on the market for whatever could be obtained. In the warehouse of one concern, for instance, 110,000 pounds of fish were condemned. Ice cream cones numbering 274,200, having been improperly packed or cared for, were condemned; 19,795 pounds of flour were condemned because of improper handling in transportation and of the presence of weevils; 20,000 cans of foodstuffs were seized and condemned because the cans were either swelled, leaking or rusty, and many condemnations of less importance were made.

The Health Department does not point with pride to such condemnations as are enumerated above, nor to any other condemnations, nor to prosecutions instituted and fines collected under the food laws. If forbidden foodstuffs are offered for sale in the Boston market, the department is glad when it is able to locate them and force their withdrawal or destruction. The presence of such foodstuffs, however, is ordinarily evidence of ignorance, carelessness or dishonesty on the part of the owner. And inasmuch as the owner, to make a living

out of his business, must charge the public with the cost of goods destroyed — whether by official condemnation or otherwise — the extent to which condemnations are necessary affords a fair index to the price the public is compelled to pay for the ignorance, carelessness and dishonesty of food producers and distributers. The public pays, too, fines imposed upon food producers and distributers for the attempted sale or the sale of forbidden foodstuffs, inasmuch as the offender must add to the cost of his business the amount paid out in fines, and charge the public accordingly. If losses through condemnation and fines came out of the pockets of the producers and distributers of foodstuffs, the ignorant, careless and dishonest producers and distributers would long since have been driven out of business. The only hope in the situation seems to be jail sentences for habitual offenders of this class; for jail sentences could not be passed on to the ultimate consumer as fines and losses through condemnation are.

While enactment of the law providing specifically for the licensing of producers and distributers of nonalcoholic beverages and the law regulating bakeries have undoubtedly contributed largely toward an increased cleanliness and wholesomeness of the products put out by bottlers and bakers, yet the largest and most important part of the gain in this respect has been due solely to the increased force at the command of the Health Department for food inspection work. The inspection of bottling establishments and of bakeries has shown deplorable conditions in many cases, and in twelve instances it was found necessary to close bakeries, before the proprietors could be led to see the need for better sanitation. On the whole, however, the cooperation of the bakers and bottlers throughout the city has been obtained, and conditions in these trades are now far better than ever before.

One of the most effective pieces of work undertaken by the Health Department showed definite results during the year, when fruit brought into Boston from the Western Coast was found practically free from contamination by arsenic. In 1919 it was observed that much of the fruit brought into Boston from the Western Coast was unduly contaminated with arsenic, the result of having been sprayed too late, or too heavily, or in some inefficient manner. Large quantities of such fruit were condemned, and for a while a strenuous contest with the fruit growers of the Western Coast was threatened. An appeal was taken by the fruit growers to the United States Bureau of Chemistry, at Washington, in an effort to have that Bureau sanction the shipment and distribution of such fruit as was condemned by the Boston Health Department, but the decision of the Health Department was sustained. Wiser councils then prevailed, however, and

instead of undertaking to justify the shipment of such fruit the growers combined to work out methods whereby fruit might be shipped free from arsenic. Their efforts were at first more or less unsuccessful, and in 1920 condemnations were relatively large, although not so large as in 1919, and again some hard feeling was aroused against the Health Department. By 1921, however, fruit growers of the west had organized their forces and had put into operation methods that have resulted in the shipment into Boston this year of fruit substantially free from arsenic. This result has been accomplished largely through the co-operation of the state officers in the western states who have been charged with the promotion and the supervision of the production and shipment of fruit, and the co-operation of the growers themselves, and their agents in Boston. The work undertaken by the Boston Health Department has, of course, reacted to the benefit of the entire country inasmuch as there is no reason to believe that the fruit now being shipped to Boston is in any way different from that distributed throughout the United States generally.

A personal inspection of many of the creameries and milk shipping stations through which milk and cream come from the farmer on their way to Boston was made during the past summer by the Health Commissioner. Conditions at many of these establishments were far from satisfactory, but as a result of the inspection many substantial improvements have been made and more are under way. An effort has been made to accomplish such results rather by co-operation than by compulsion, and the results up to the present time justify the method. This is nowhere shown better than in the results that have been obtained in the cooling of milk, both on the farm and in transportation. Of a letter to farmers, prepared by the Health Department, urging the cooling of milk, approximately 25,000 copies have been sent out by milk distributers doing business in Boston, covering the entire milk producing area, including all of New England and parts of New York and Quebec. With a view to stimulating co-operation between railroad managements and milk distributers, a conference was held on May 16, 1921, where the various aspects of the matter and the relative duties of consignors, transportation agents and consignees were discussed, and there seems to have resulted a better understanding among all parties and a substantial improvement in the service. Still another conference was held, this time with representatives of the large milk distributing agencies, and as a result a new form of application has been prepared for use by milk producers and distributers desiring to bring milk into Boston from hitherto unapproved sources, which will not merely furnish the Health Department with a better knowledge of the

sources of Boston's milk supply, but will have a very definite educative effect on the farmers and distributers who may be called upon to fill in the details called for by the application blank.

That milk should be handled only by "suitable persons" has been recognized by law, since the enactment of chapter 543, Acts of 1909, which provides for the issue of licenses to such persons only. Up to the past year, however, no effect has been made to require would-be producers and distributers of milk to prove any definite knowledge or experience concerning their fitness to enter the business. The practice has now been established, however, of seeing that each new applicant is more or less acquainted with or experienced in the business in which he desires to enter and of limiting any permit or license that may be issued so as to keep the licensee from entering into the business beyond what his knowledge and experience will enable him to go with safety to the public. The licenses of two persons to distribute milk in Boston have been revoked during the current year, because of improper conduct or inadequate equipment. It is more important, however, to keep unfit persons from entering into the milk business than it is to get them out of it after they have entered upon it, and to that end the qualifications of would-be producers and distributers are to be scrutinized more closely than ever before.

Some progress has been made toward improving housing conditions. During the year 176 dark rooms have been provided with adequate light and ventilation; toilet accommodations have been improved in 624 instances, additional accommodations having been provided, old fixtures remodeled or replaced, and adequate lighting and ventilation required; in 125 cases sinks have been removed from hallways to kitchens, and 55 new sinks have been installed; 32 hallways have been lighted and ventilated; and 25 yards have been paved and drained. The usual work of the Health Department has been carried on looking toward the suppression of nuisances and particular attention has been paid to the systematic inspection of stables, hen yards, massage parlors, vapor baths, day nurseries, public dumps, and so on, as potential sources of danger and as such required to be licensed.

Mosquito breeding pools and other accumulations of water have received special attention, a working force having been maintained for that purpose during the summer months. All such places, as they were located, were recorded on maps, a careful study and record were made of the finding of mosquito larvæ and mosquitoes in and about the pools, and the surface was systematically oiled, a record being kept of the dates of oiling and of the amount of oil used. Steps were taken to procure the permanent abatement of pools and

swamps by drainage or filling wherever that course has been practicable. The work done and the records made during the summer of 1921 will afford a substantial basis for a systematic and more economical work in the future.

By a readjustment of the working forces it has been possible to open an additional public comfort station without expense to the city. The toilet accommodations for the public in the basement of the City Hall, which had been out of service for some time, were put into proper condition by the Superintendent of Public Buildings, and one of the caretakers on the Health Department pay roll assigned to look after them. All of the public comfort stations throughout the city have been thoroughly overhauled and are now in excellent condition. Bulletin boards have been installed in each to facilitate the publicity work of the Health Department. A new agreement has been made for the use of coin locks in these stations, and a concession has been let for the installation of penny-in-the-slot scales, whereby the public will be accommodated and the city will derive an increased revenue.

Increased floor space provided for the Health Department in the City Hall Annex has permitted substantial improvement in arrangements for the work of officers and employees, for the keeping of files and records, and for transacting public business generally. It has permitted, too, a beginning toward a much needed enlargement of the accommodations and equipment of the chemical laboratory, which it is hoped will within the next year be prepared to do for the public much needed work in the supervision and control of foods and drugs belonging to that group the purity of which can only be determined by chemical analyses. The nucleus of a working library has been installed and the books and magazines already belonging to the Health Department have been rearranged and catalogued. Special attention has been paid to providing an adequate supply of technical and trade journals relating to the activities of the department and to making such journals available to all officers and employees. To encourage the use of such sources of current information, a journal club has been organized, meeting once a month, when articles having any practical bearing on the activities of the department are reported upon and discussed. To promote sympathy, understanding and co-operation among the responsible supervising officers of the Health Department, monthly conferences are held, at which the general activities of the department are discussed and plans made for overcoming difficulties and for increasing the efficiency of the department. On the whole it may be said that there has resulted from these measures an improved morale in the working force of the department.

FOOD INSPECTION IN DECEMBER.

The Christmas market always entails added work and added responsibility upon the Food Inspection Division. The general state of the market, whether that state be the result of the activities of the Food Inspection Division or not, is commonly reflected in the number and character of complaints received by the Health Department during and after the holidays, made by purchasers who have had unsound or unwholesome food sold to them. In so far as complaints filed with the Health Department during and after the recent Christmas season show, the Boston markets were in unusually good condition.

During Christmas week over nine hundred pounds of turkeys were condemned by the Food Inspection Division as unfit for food, and not a single bad turkey was brought to the attention of the Health Department by any aggrieved customer after or during the holiday, a unique experience in the history of the Health Department. During the month about three tons of unsound walnuts were condemned by the Food Inspection Division, and disposed of otherwise than for food, representing, of course, some loss to the would-be vendor, but representing a certain saving to the community. Fortunately these nuts were intercepted before they had passed into the hands of jobbers or retailers, who could, had they once obtained them, mixed them with nuts of a better grade in a way that would render detection and prosecution extremely difficult. Three hundred ten pounds of candy were condemned, 125 pounds of raisins, 10 pounds of figs, and 50 pounds of currants.

TUBERCULOSIS MENINGITIS IN PREVIOUSLY INFECTED HOUSEHOLDS.

In view of the generally accepted view as to the susceptibility of children to infection by tuberculosis, it is interesting to note that of the eleven deaths reported in Boston among children under one year of age during 1921, three, or 27 per cent, occurred in households where pulmonary or other form of tuberculosis previously existed. Of the twenty-five deaths among children from one to five years of age, inclusive, eight, or 32 per cent, occurred in such households. This matter is to be made the subject of an intensive investigation by the Health Department in the near future.

VITAL STATISTICS FOR CALENDAR YEAR 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING 1921, WITH COMPARATIVE FIGURES FOR 1920. RESIDENTS AND NON-RESIDENTS.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	10,217	11,601	—1,384	13.48	15.44	—1.96
Nonresidents deducted	8,401	9,792	—1,391	11.09	13.03	—1.94
By Age:						
Under one year	1,495	1,966	—471	1.97	2.61	—.64
One year to four years, inclusive	584	807	—223	.77	1.06	—.29
Sixty years and over	3,613	3,768	—185	4.77	5.05	—.28
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	638	652	—14	.84	.86	—.02
Arteriosclerosis	489	513	—24	.64	.68	—.04
Heart disease	1,449	1,474	—25	1.91	1.96	—.05
Nephritis, chronic	541	604	—63	.71	.80	—.09
Infant and Maternal Mortality:						
a. Total registered live births	19,359	19,494	—135	25.55	25.94	—.39
b. Registered stillbirths	634	657	—23	.84	.87	—.03
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	31.71	32.60	—.89
c. Deaths of mothers from causes incident to childbirth	149	157	—8	.20	.21	—.01
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	7.45	7.80	—.35
Deaths of children in first year of life	1,495	1,966	—471	1.97	2.61	—.64
Deaths in first year per 1,000 live births,	.....	.....	.....	77.22	100.85	—23.63
Violence:						
Accidents	507	510	—3	.67	.68	—.01
Homicides	30	38	—8	.04	.05	—.01
Suicides	102	100	+2	.13	.13	.....
Miscellaneous:						
Alcoholism, acute or chronic	69	31	+38	.09	.04	+.05
Bronchopneumonia	426	689	—263	.56	.92	—.36
Cancer	1,055	968	+87	1.40	1.29	+.11
Cirrhosis of the liver	55	38	+17	.07	.05	+.02
Diabetes mellitus	148	175	—27	.19	.23	—.04
Diarrheal diseases, children under two years of age	208	361	—153	.27	.48	—.21

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON FOR CALENDAR YEAR 1921, WITH COMPARATIVE FIGURES FOR 1920. RESIDENTS AND NON-RESIDENTS.

		CASES AND DEATHS.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases.	**50**	244	—194	**.06**	.32	—.26
	Deaths.	**12**	48	—36	**.01**	.06	—.05
Cerebrospinal meningitis	Cases.	**54**	43	+11	**.07**	.06	+.01
	Deaths.	**28**	33	—5	**.04**	.04	.....
Diphtheria	Cases.	**2,992**	2,010	+982	**3.94**	2.67	+1.27
	Deaths.	**148**	140	+8	**.19**	.18	+.01
Influenza	Cases.	**148**	8,392	—8,244	**.19**	11.17	—10.98
	Deaths.	**22**	479	—457	**.03**	.64	—.61
Measles	Cases.	**3,396**	6,518	—3,122	**4.48**	8.67	—4.19
	Deaths.	**38**	65	—27	**.05**	.09	—.04
Pneumonia (lobar)	Cases.	**1,098**	1,522	—424	**1.45**	2.02	—.57
	Deaths.	**457**	672	—215	**.60**	.89	—.39
Scarlet fever	Cases.	**1,999**	2,154	—155	**2.63**	2.87	—.24
	Deaths.	**53**	71	—18	**.07**	.09	—.02
Tuberculosis (pulmonary)	Cases.	**2,177**	2,308	—131	**2.87**	3.07	—.20
	Deaths.	**760**	821	—61	**1.00**	1.09	—.09
Tuberculosis (other forms)	Cases.	**366**	317	+49	**.48**	.42	+.06
	Deaths.	**117**	135	—18	**.15**	.18	—.03
Typhoid fever	Cases.	**142**	141	+1	**.19**	.19	.....
	Deaths.	**24**	11	+13	**.03**	.01	+.02
Whooping cough	Cases.	**689**	2,550	—1,861	**.91**	3.39	—2.48
	Deaths.	**33**	155	—122	**.04**	.21	—.17

DEATHS AND DEATH RATES FOR CERTAIN CITIES, DECEMBER, 1921.

City.	Population Estimated July 1, 1921.	Deaths During Week Ending					Death Rates During Week Ending				
		Dec. 3.	Dec. 10.	Dec. 17.	Dec. 24.	Dec. 31.	Dec. 3.	Dec. 10.	Dec. 17.	Dec. 24.	Dec. 31.
Boston	757,634	196	188	199	237	214	13.5	12.9	13.7	16.3	14.7
Bridgeport, Conn.	149,967	20	25	32	30	36	7.0	8.7	11.1	10.4	12.5
Cambridge	110,444	27	23	27	33	32	12.7	10.9	12.7	15.6	15.1
Fall River	120,668	31	29	26	21	32	13.4	12.5	11.2	9.1	13.8
Lowell	113,757	23	33	20	42	26	10.5	15.1	9.2	19.3	11.9
New Bedford	125,012	31	31	12	23	25	12.9	12.9	5.0	9.6	10.4
Providence, R. I.	239,645	49	72	69	60	78	10.7	15.7	15.0	13.1	17.0
Springfield	135,877	35	27	28	40	38	13.4	10.4	10.7	15.4	14.6
Worcester	184,972	44	37	53	54	57	12.4	10.4	14.9	13.2	16.1

VITAL STATISTICS, DECEMBER, 1921.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING DECEMBER, 1921, WITH COMPARATIVE FIGURES FOR DECEMBER, 1920.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
All Causes:						
Total deaths	883	894	—11	13.98	14.32	—.34
Nonresidents deducted	725	749	—24	11.48	11.97	—.49
By Age:						
Under one year	119	144	—25	1.88	2.31	—.43
One year to four years, inclusive	43	58	—15	.68	.93	—.25
Sixty years and over	333	315	+18	5.27	5.05	+.22
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	75	58	+17	1.18	.93	+.25
Arteriosclerosis	35	49	—14	.55	.78	—.23
Heart disease	132	132	.....	2.09	2.11	—.02
Nephritis, chronic	46	41	+5	.73	.65	+.08
Infant and Maternal Mortality:						
a. Total registered live births	1,540	1,496	+44	24.39	23.89	+.50
b. Registered stillbirths	52	57	—5	.82	.90	—.08
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	32.66	36.70	—4.04
c. Deaths of mothers from causes incident to childbirth	13	13	.....	.20	.21	—.01
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	8.16	8.37	—.21
Deaths of children in first year of life	119	144	—25	1.88	2.31	—.43
Deaths in first year per 1,000 live births,	.....	.....	.....	77.27	96.26	—18.99
Violence:						
Accidents	43	41	+2	.68	.65	+.03
Homicides	8	1	+7	.13	.016	+.11
Suicides	9	13	—4	.14	.21	—.07
Miscellaneous:						
Alcoholism, acute or chronic	4	5	—1	.06	.08	—.02
Broncho-pneumonia	35	49	—14	.55	.78	—.23
Cancer	96	80	+16	1.52	1.28	+.24
Cirrhosis of the liver	8	4	+4	.13	.06	+.07
Diabetes mellitus	9	15	—6	.14	.24	—.10
Diarrheal diseases, children under two years of age	7	14	—7	.12	.23	—.11

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1921.	1920.	Increase or Decrease.	1921.	1920.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis....Cases..	2	4	—2	.03	.06	—.03
Deaths.	.....	1	—1	.....	.016	—.01
Cerebrospinal meningitis....Cases..	3	5	—2	.05	.08	—.03
Deaths.	2	4	—2	.03	.06	—.03
Diphtheria....Cases..	313	290	+23	4.96	4.65	+.31
Deaths.	17	21	—4	.27	.33	—.06
Influenza....Cases..	10	30	—20	.16	.48	—.32
Deaths.	1	4	—3	.01	.06	—.05
Measles....Cases..	221	143	+78	3.50	2.29	+1.21
Deaths.	4	2	+2	.06	.03	+.03
Pneumonia (lobar)....Cases..	95	151	—56	1.50	2.42	—.92
Deaths.	49	61	—12	.78	.97	—.19
Scarlet fever....Cases..	168	143	+25	2.66	2.29	+.37
Deaths.	.....	8	—8	.....	.12	—.12
Tuberculosis (pulmonary)....Cases..	166	192	—26	2.62	3.07	—.45
Deaths.	43	48	—5	.68	.76	—.08
Tuberculosis (other forms)....Cases..	25	24	+1	.39	.38	+.01
Deaths.	11	13	—2	.17	.20	—.03
Typhoid fever....Cases..	7	6	+1	.12	.09	+.03
Deaths.	1	.....	+1	.016	.....	+.016
Whooping cough....Cases..	29	103	—74	.46	1.74	—1.28
Deaths.	.....	7	—7	.....	.11	—.11

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1921 (mid-year), based upon the federal census of 1920, has been used.

An Explanation.— Attention has been called to the fact that through the unfortunate manner of stating the case in the November issue of the Bulletin, the impression may have been conveyed that the Nutrition Clinic at the Blossom Street Health Unit was no longer conducted by the Jewish Federated Charities. It was not intended to convey that idea but merely that the work of the clinic, which is being conducted by the Jewish Federated Charities, had been more intimately correlated than formerly with the work of the Baby Hygiene Association and the Boston Health Department. This explanation is made in justice to the excellent work carried on by the Jewish Federated Charities through the clinic.

SUMMARY OF THE WORK, DECEMBER, 1921.

BUREAU OF ADMINISTRATION.

	Nov.	Dec.
Conferences	3	3
Hearings	3	3
Prosecutions ordered	134	87
Orders	3	5
Special drafts	2	1
Bids accepted	4	0
Building ordered removed	0	1
Building ordered vacated,	0	1

	Nov.	Dec.
Personnel:		
Appointments	1	2
Appointments terminated	1	1
Appointments made permanent	5	4
Leaves of absence granted	4	1
Salaries increased	0	6

LICENSES, PERMITS, ETC.

	Nov.	Dec.
Burial permits	940	1,037
Disinterment permits	23	7
Undertaker's license	0	4
Milk licenses	119	227
Pedlers' licenses, general	34	31
Hen licenses, granted	54	77
Dump licenses issued	5	19
Dump licenses refused	0	8
Manure license	1	0
Lodging house certified	0	1
Provisional stable licenses granted	3	1

	Nov.	Dec.
Stable permit granted	1	2
Stable permit refused	0	0
Denatured alcohol licenses,	8	0
Manicure-massage:		
Granted	32	45
Rejected	1	0
Revoked	1	0
Lying-in hospitals certified	2	3
Basement certified for occupancy	0	1

MEDICAL DIVISION.

COMMUNICABLE DISEASES.

	Nov.	Dec.
Visits by medical inspectors	1,272	1,814
Deaths investigated	19	16
Vaccination	15	7

	Nov.	Dec.
Vaccination certificates	15	5
Cases brought to Boston for treatment	64	79
Antitoxin administered	15	15

NURSING SERVICE.

	Nov.	Dec.
Communicable disease visits	2,273	3,458
Babies visited, first visit	1,013	806
Revisits	1,688	1,365

HEALTH UNIT (Blossom Street).

	Nov.	Dec.
Health Department proper:		
Vaccinations	15	5
Vaccination certificates issued	13	7
Cases visited by nurses:		
Communicable diseases	145	103
Babies	46	47
Complaints made of insanitary conditions	9	12
Total	228	84

	Nov.	Dec.
Baby Hygiene Association:		
Babies cared for	288	295
Babies newly admitted,	22	17
Babies readmitted	4	3

	Nov.	Dec.
Conferences:		
Number	8	280
Total attendance	288	6
Home visits by nurses	397	238

	Nov.	Dec.
Boston Dispensary:		
Calls by district physician from Boston Dispensary	62	47
Consumptives' Hospital Department:		
Calls by nurses in districts	786	920
Instructive District Nursing Association:		
Visits by nurses	1,487	1,839
Jewish Welfare Center:		
Conferences held	4	4
Number of children attending conferences	152	98
Visitors:		
City	20	12
Out of city	3	4
General:		
Number of persons applying for information	38	94

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Nov.	Dec.
New reports	393	626
Stores inspected	1,837	2,334
Sanitary defects remedied	214	306
Complaints at office	37	27
Referred to Sanitary Division	29	45
Milk applications approved	155	215
Pedlers:		
Applications for licenses approved	32	31
Vehicles inspected and approved	761	706
Court cases	109	70
Fines	$545	$1,630

CONDEMNATIONS.

REQUESTED.

Cheese	31 cans	Salt herring	50 pounds
Squash	30,000 pounds		

WITHOUT REQUEST.

Candy	310 pounds	Eggs	2 dozen
Canned goods	2 cans	Evaporated milk	5 cans
Corn flakes	2 pkgs.	Egg plant	688 pounds
Corn meal	6 pkgs.	Figs	10 pounds
Chestnuts	100 pounds	Flour	2,197 pounds
Chicken	21 pounds	Fowl	5 pounds
Crackers	32 pounds	Geese	70 pounds
Currants	50 pounds	Ice cream cones	2,000 pounds

Lobster	5 pounds	Raisins	125 pounds
Macaroni	264 pounds	Rolled oats	3 pkgs.
Peaches (dry)	30 pounds	Smoked pork	75 pounds
Pears	2 bushels	Tea	2 pkgs.
Pop corn	10 pounds	Tea	20 pounds
Pork and beans	2 cans	Turkeys	918½ pounds
Prunes	50 pounds	Veal	33 pounds
Rabbits	108 pounds	Walnuts	6,400 pounds

Samples submitted to Chemical Laboratory for analysis:

Candy	1	Alcohol	1
Drugs	5	Liquor	1
Eggs	2	Sausage	2
Oil	1		

LIVE STOCK INSPECTION (Brighton Abattoir).

	Nov.	Dec.		Nov.	Dec.
Cattle inspected	227	536	Sheep inspected	1	0
Calves inspected	732	417	Parts condemned	604	375
Swine inspected	6,231	8,102	Animals condemned	6	12

DAIRY DIVISION.

	Nov.	Dec.		Nov.	Dec.
Dairies inspected	311	162	With milk rooms	139	101
Scoring above 50*	173	125	Without milk rooms	172	61
Scoring below 50	138	37	Inactive	10	8

BUREAU OF MILK INSPECTION.

	Nov.	Dec.		Nov.	Dec.
Chemical Inspection of:			Bacteriological examination of:		
Milk	1,303	1,597	Milk	680	911
Ice cream	0	7	Ice cream	22	22
Vinegar	56	0	Court cases	10	39
Miscellaneous	13	13	Fines	$195	$450

SANITARY INSPECTION.

	Nov.	Dec.		Nov.	Dec.
Original inspections	1,302	1,138	Car reports	1,269	975
New reports	1,871	1,451	Complaints	816	490
Reinspections	6,065	4,495	Court cases	95	81
Legal notices served	437	365	Fines	$81	$21

HOUSING SERVICE.

	Nov.	Dec.		Nov.	Dec.
Interior rooms lighted and ventilated	17	6	Water-closets:		
Water-closets:			Newly installed	8	6
Interior lighted and ventilated	75	64	Old buildings removed	3	2
			Yards paved and drained,	8	2

* Passable mark.

BACTERIOLOGICAL LABORATORY.

	Nov.	Dec.
Examinations for diagnosis and release:		
Diphtheria	1,861	2,096
Tuberculosis	249	224
Typhoid	33	39
Gonorrhea	565	550
Gonorrheal ophthalmia	43	45
Syphilis	1,018	963
Other examinations	†17	*24
Bacteriological examinations of milk	675	837
Examination of rats	1,401	939

* Malaria, 5; genito-urinary, T. B., 4; dark field examinations, 2; walnuts for parasites, 1; beef decomposition, 1; virulence tests, 4; smear for leprosy, 1; olives for botulinus and decomposition, 1; water for sewage, 1; spinal fluid for meningicocci, 2; clams for B. coli, 1; chicken for decomposition, 1.

† Dark field examinations, 4; genito-urinary, T. B., 1; malaria, 5; material alleged to be of animal nature, 1; cocoa for worms, 3; culture virulence, 3.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF TUBERCULOSIS AND DATE OF DEATH DURING NOVEMBER, 1921.

Classification.	Number.	Percentage.
After death	6	10.0
7 days or less	5	8.3
8 to 14 days, inclusive	1	1.7
15 to 21 days, inclusive	3	5.0
22 to 31 days, inclusive	2	3.3
Within First Month	17	28.3
Within second month	4	6.7
Within third month	4	6.7
Within fourth month	5	8.3
Within fifth month	—	—
Within sixth month	5	8.3
Within seventh month	1	1.7
Within eighth month	2	3.3
Within ninth month	2	3.3
Within tenth month	2	3.3
Within eleventh month	1	1.7
Within twelfth month	1	1.7
Within First Year Preceding Death	44	73.3
Within second year	5	8.3
Within third year	3	5.0
More than three years	3	13.3
Totals	60	99.9

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